

Measurement Report

Company

Astra Industries Sal

Luminaire Measurement

Astra Multiline 5x4Watts

Measurement Code

1006A/CL673/11-06I-G2



Approved by DLAB



Approved by Laboratory Technician

Report Date: 18/07/11

Report Attachments	▶ Photometric Measurement Report	☒
	o Intensity Matrix [cd/klm]	☒
	o Polar Diagram	☒
	o Cartesian Diagram	☐
	o Standard Photometric File Formats	☐
	Eulumdat	☐
	IESNA	☒
	OXL OxyTech	☐
	▶ Colorimetric Measurement Report	☐
	▶ Emergency Test Report	☐
	▶ Laboratory Parasite Light Evaluation (Background Light Noise Definition)	☐
	▶ Light Pollution Laws Conformity Declaration	☐
	▶ Luminaires Assembly Instructions	☐

Photometric Measurement Report

Measurement Code 1006A/CL673/11-06I-G2

Laboratory Main Manager (DLAB) Mr. Danilo Giannetti
Laboratory Manager Mr. Abdellatif Zaher

Manufacturer Data

Manufacturer Astra Industries SAL
OxyTech Manufacturer Code CL673
Address Dora, St Joseph Road – 80220 - Beirut
Contact Person Mr. Tony Araman

Tested Luminaire Data

Type LED Luminaire
Model Astra Multiline 5x4Watts
Description Astra Multiline 5x4Watts
Dimension [mm] 1000-110-100
Dimension of Luminous Area [mm] 870-80-0
Led Type and Commercial Trademark Indium Gallium
Ballast Type and Trademark ---
Heat Sink Type and Trademark ---
Ref. Lamp/ Ref. Ballast 1006B/CL673/11-06L

Measurement Data

Measurement Data 14-07-11
Measurement Type C-γ Asymmetrical
Reference Standard UNI EN 11356 del 2010 - UNI EN 13032-1 del 2005
Lamp Stabilization Delay 45 min.
Number of Luminaires Tested 1

Measurement Uncertainty

Source Instability $\leq 1\%$
Efficiency Calculation Uncertainty (LOR) 2.5%
Luminous Intensity Normalised Values 2.5%
Angular Precision in C and γ $\pm 0.05^\circ$

Instruments Data

Goniophotometer Luminaire Rotating System sample as per EN 13032 and CIE121 Standard-
Model T2 Oxytech – ref. Oxy G2. Measurement Distance: 6.44 m
Voltage stabilizers Electro - test model TPS/M 6000
Multimeter Kinetiq Ppa5530
Luxmeter C&G

Measurement of Electrical Parameters

Source Voltage 230 V $\pm 0.2\%$
Harmonic Distortion $< 0.5\%$
Source Frequency 50 Hz $\pm 0.1\%$

Environmental Conditions

Laboratory Temperature [°C]	25°C ± 1°C
Relative Humidity	60%
Air Movement	< 0,2 m/s

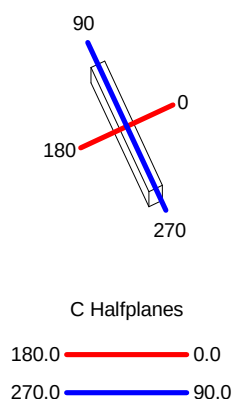
Measurement Notes

- The data displayed on this report are those obtained as per the test described above
- This report concerns only the tested luminaire
- The information contained in the present report/this report is not to be extended in any way to any other sample luminaires different from the one used in this study
- The Measurement Code is shown on the luminaire shield and on the reflector of the luminaire and cannot be deleted

Luminaire		Measur.			Lamp	
Code	ASTRA MULTILINE 5X4W	Code	CL673/11-06L		Code	1006B/CL673/11-06L
Name	ASTRA MULTILINE 5X4W	Name	ASTRA MULTILINE 5X4W		Number	1
Line	Astra Industries 2011	Date	14-07-2011		Position	
Efficiency	100.00%	Coordinate system	C-G		Total Flux	976.40 lm
Maximum value	494.73 cd/klm	Position	C=350.00 G=1.00		Asymmetrical	
Rectangular Luminaire	Length	1000 mm	Width	110 mm	Height	100 mm
Rectangular Luminous Area	Length	870 mm	Width	80 mm	Height	0 mm
Horizontal Luminous Area	0.069600 m2	Emitting area on Plane 180°			0.000000 m2	
Emitting area on Plane 0°	0.000000 m2	Emitting area on Plane 270°			0.000000 m2	
Emitting area on Plane 90°	0.000000 m2	Glare area at 76°			0.016838 m2	
Symmetry Type	Asymmetrical	Maximum Gamma Angle			90	
Measurement Distance	6.44	Measurement Flux			976.40 lm	
Operator	AZ	Source voltage			230.24 V	
Temperature	25.00 °C	Source current			0.29 A	
Humidity	60.00 %	Photocell			Czibula Grundmann	
Notes	Potenza 32.11100FP 0.48457					

Luminaire Lamps					
Line	Code	Name	Fluxlm	Pow.W	Qta
LED 2011	1006B/CL673/11-06L	1006B/CL673/11-06L	976.40	32.00	1
C.I.E.	57 86 98 100 100	D DIN 5040	A40		
F UTE	1.00 D	B NBN	BZ 3		

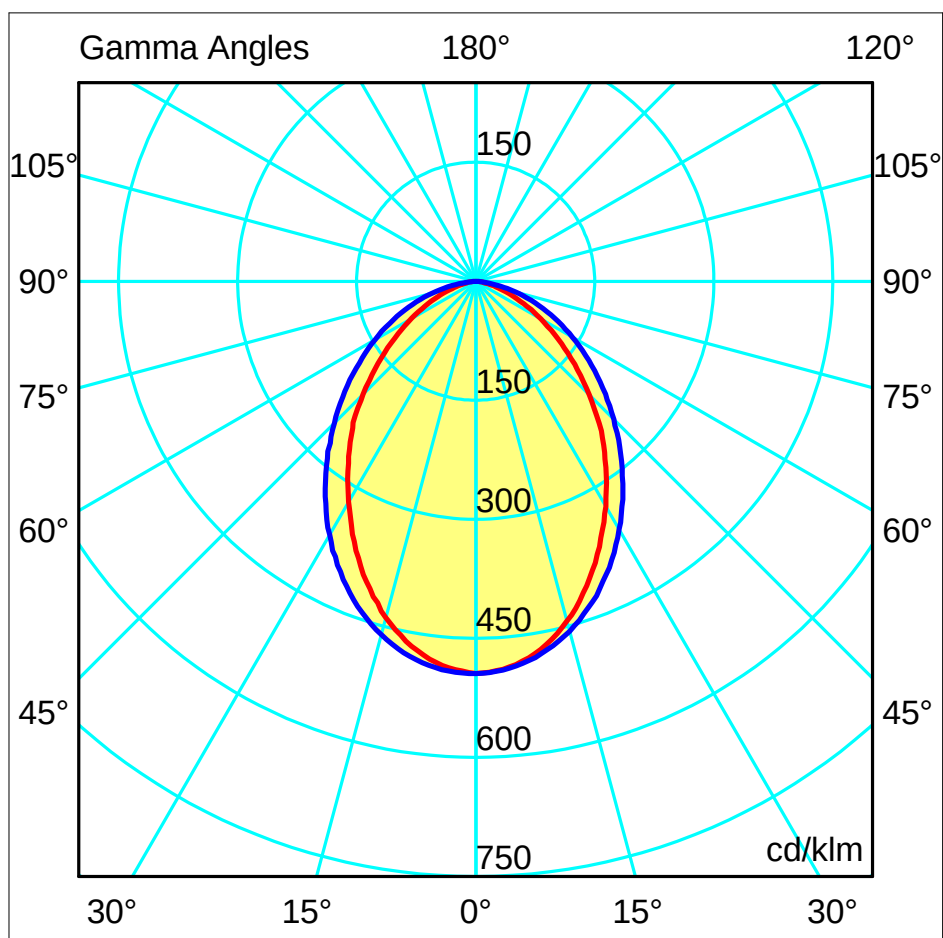
1000mm x 110mm



ULOR 0.00 %

DLOR 100.00 %

RN 0.00 %



Luminaire		Measur.								Lamp			
Code	ASTRA MULTILINE 5X4W	Code	CL673/11-06I							Code	1006B/CL673/11-06L		
Name	ASTRA MULTILINE 5X4W	Name	ASTRA MULTILINE 5X4W							Number	1		
Line	Astra Industries 2011	Date	14-07-2011							Position			
Efficiency	100.00%				Coordinate system		C-G		Total Flux		976.40 lm		
Luminous Intensity Table cd/klm								Table 1/6					
	C 0.00	C 10.00	C 20.00	C 30.00	C 40.00	C 50.00	C 60.00	C 70.00	C 80.00	C 90.00	C 100.00	C 110.00	C 120.00
G 0.0	494.24	494.24	494.24	494.24	494.24	494.24	494.24	494.24	494.24	494.24	494.24	494.24	494.24
G 1.0	493.39	493.82	493.82	493.82	494.11	494.12	493.82	493.82	493.82	493.82	493.82	493.91	493.82
G 2.0	492.86	492.97	492.93	492.97	493.39	493.39	493.31	493.39	492.97	493.05	492.54	492.97	492.54
G 3.0	491.33	491.70	491.43	491.92	492.12	492.37	492.12	492.54	492.12	492.12	491.69	491.81	491.69
G 4.0	490.00	490.42	490.00	490.42	490.42	491.05	490.42	491.27	490.77	490.84	489.99	490.64	489.71
G 5.0	487.45	488.02	487.66	488.50	488.72	489.15	488.72	489.15	489.05	489.15	488.72	488.72	487.62
G 6.0	485.33	485.33	484.91	486.18	486.17	487.02	486.85	487.17	487.02	487.19	486.38	486.91	485.53
G 7.0	481.98	482.32	482.03	483.21	483.63	484.47	484.05	485.10	484.90	484.90	484.05	484.47	483.22
G 8.0	479.03	478.97	478.54	479.82	480.44	481.16	481.84	482.35	481.93	482.33	481.10	481.28	479.76
G 9.0	474.96	475.34	475.15	476.85	476.83	478.53	477.71	479.80	478.96	479.93	478.11	478.09	476.65
G 10.0	470.90	471.07	470.93	472.74	472.83	474.46	475.13	476.41	475.56	475.84	474.86	475.12	472.89
G 11.0	465.82	466.67	466.24	468.36	468.76	471.03	471.35	472.57	472.16	472.59	471.01	471.46	469.22
G 12.0	461.00	461.15	461.16	463.47	464.52	466.74	467.07	469.02	468.16	469.19	467.49	468.05	464.48
G 13.0	455.21	456.06	456.46	458.60	459.85	462.29	461.97	464.99	464.52	464.95	462.87	463.34	459.82
G 14.0	449.43	451.26	450.97	454.09	454.43	457.30	457.93	460.27	459.90	460.70	458.57	458.54	455.57
G 15.0	442.91	445.18	444.76	447.57	449.66	453.00	453.48	455.28	455.18	456.45	453.85	453.67	450.07
G 16.0	437.39	438.07	438.07	442.06	443.29	446.69	448.19	450.98	450.16	450.93	449.52	448.34	444.52
G 17.0	430.62	432.13	431.03	435.25	437.77	441.14	442.39	445.12	444.99	446.69	444.14	442.93	439.15
G 18.0	423.39	424.05	424.38	428.91	430.97	435.77	436.92	440.07	439.55	440.32	437.77	438.40	432.62
G 19.0	415.20	417.11	417.82	421.57	425.03	429.20	431.68	434.37	434.20	434.76	432.67	431.77	426.58
G 20.0	408.42	410.50	410.50	415.42	417.64	423.04	424.54	428.85	428.47	429.90	425.88	425.87	420.00
G 21.0	400.36	402.56	403.75	409.05	411.06	416.45	418.15	422.06	422.05	424.31	420.44	419.49	414.01
G 22.0	392.68	395.18	396.33	401.77	404.00	409.54	412.29	416.28	415.69	417.35	414.69	413.22	407.48
G 23.0	385.42	387.24	388.31	393.99	396.77	403.41	404.69	409.81	409.25	410.29	407.58	405.25	400.32
G 24.0	376.34	379.10	379.44	385.74	388.00	395.32	398.41	404.09	401.68	404.10	400.89	399.27	393.05
G 25.0	368.88	371.50	373.40	378.34	381.04	388.77	390.30	396.16	395.29	398.01	393.69	392.16	385.53
G 26.0	359.59	362.60	364.89	370.40	373.19	381.25	383.76	389.02	389.07	390.28	386.52	385.75	378.30
G 27.0	351.41	354.52	355.73	361.70	366.28	373.40	376.16	381.35	381.76	383.70	379.26	378.10	370.57
G 28.0	343.71	347.75	347.71	354.65	357.13	365.88	368.60	375.31	375.27	375.80	372.55	370.91	363.69
G 29.0	335.07	338.46	339.14	345.60	349.41	358.08	361.43	366.81	365.99	368.93	364.72	362.85	355.96
G 30.0	327.51	330.48	331.67	337.99	342.23	349.23	353.14	359.78	359.38	361.13	356.63	355.12	346.90
G 31.0	318.22	322.09	322.89	330.66	335.06	341.97	346.35	352.42	351.83	354.35	349.73	347.03	340.87
G 32.0	310.11	314.15	313.51	322.42	326.10	334.25	337.56	345.30	345.03	346.14	342.06	340.15	332.37
G 33.0	302.67	306.55	307.53	313.26	318.19	326.15	330.56	336.88	337.02	338.20	333.82	333.13	324.40
G 34.0	294.08	298.52	298.62	305.96	308.57	319.88	322.39	328.66	328.30	331.39	327.21	325.03	317.20
G 35.0	286.00	290.30	290.72	297.18	302.02	311.19	314.63	321.09	321.18	323.04	319.22	318.23	308.54
G 36.0	277.05	280.06	282.46	289.71	295.02	302.23	306.88	313.32	313.61	315.41	310.51	309.34	300.58
G 37.0	269.91	273.42	274.80	280.58	284.87	295.51	299.04	306.12	306.44	306.70	302.52	300.21	292.53
G 38.0	261.58	266.19	268.14	273.63	277.78	286.77	290.57	297.36	297.73	299.76	295.54	293.57	284.82
G 39.0	253.57	257.72	259.15	266.69	270.87	279.06	283.16	289.37	289.83	291.87	286.82	284.40	277.85
G 40.0	245.89	250.15	252.26	258.78	262.88	271.32	274.91	280.95	282.02	283.79	279.26	277.67	270.88
G 41.0	236.63	242.51	244.70	252.19	255.19	263.45	267.90	275.18	275.02	275.97	272.00	269.86	262.38
G 42.0	227.56	233.48	236.63	243.91	248.39	255.77	260.33	266.58	266.36	268.96	263.26	261.93	254.38
G 43.0	218.45	225.25	227.65	236.41	239.18	248.82	252.51	258.30	258.45	261.24	256.55	255.14	246.04
G 44.0	210.59	216.07	219.38	229.18	233.12	240.94	244.87	251.09	250.86	252.42	248.63	247.49	239.47
G 45.0	202.24	206.69	210.81	219.97	226.63	233.26	238.20	243.39	243.98	245.84	242.32	239.40	233.29
G 46.0	193.62	197.90	202.53	212.50	219.27	226.66	229.92	235.88	235.49	238.07	234.42	232.39	224.81
G 47.0	185.56	189.78	194.13	204.97	212.28	220.17	222.35	228.52	228.61	230.46	226.65	225.75	218.78
G 48.0	177.54	182.44	185.99	197.66	204.20	212.71	215.86	220.86	221.51	222.93	219.27	217.56	211.13
G 49.0	169.61	174.50	178.03	188.35	197.11	205.11	208.99	214.47	213.96	216.42	211.20	211.32	203.96
G 50.0	162.74	166.56	171.38	180.27	188.91	199.74	201.70	207.16	206.59	208.94	204.79	204.09	197.10
G 51.0	154.30	159.09	163.25	171.48	180.92	192.09	194.31	200.87	199.39	201.59	197.71	196.06	190.72
G 52.0	147.49	151.28	154.68	165.57	172.94	185.24	187.21	192.95	191.50	194.18	191.42	189.70	184.22
G 53.0	139.55	143.72	147.32	156.68	166.19	178.58	180.79	185.68	186.03	187.40	183.73	183.63	177.33
G 54.0	133.90	136.70	139.22	149.48	158.36	171.11	174.73	179.46	178.00	180.10	177.53	176.86	170.12
G 55.0	126.23	130.55	133.27	142.94	150.44	163.64	168.61	171.86	172.00	173.89	170.65	170.08	163.67
G 56.0	119.82	123.62	125.42	136.09	143.21	156.02	161.30	164.91	165.38	167.21	163.22	162.83	158.19
G 57.0	113.06	116.79	119.34	128.46	136.12	148.58	154.60	159.14	159.09	160.40	157.23	156.77	151.67
G 58.0	106.40	110.11	113.44	122.22	129.66	142.01	149.04	153.27	152.14	153.61	151.54	150.47	145.43
G 59.0	99.95	105.11	106.78	114.57	121.98	134.33	142.32	146.20	145.25	146.83	144.13	143.77	139.15
G 60.0	94.69	98.09	100.45	108.55	115.94	127.75	134.85	140.19	138.82	140.34	137.61	138.10	131.90
G 61.0	87.92	91.75	93.49	102.19	108.37	121.42	129.08	133.35	131.79	134.63	131.26	131.08	126.61
G 62.0	82.89	85.90	87.25	95.47	102.42	113.68	122.06	127.46	125.91	127.80	125.45	125.32	119.00
G 63.0	78.50	80.06	81.90	89.18	95.67	107.52	114.55	12					

Luminaire		Measur.		Lamp									
Code	ASTRA MULTILINE 5X4W	Code	CL673/11-06I	Code	1006B/CL673/11-06L								
Name	ASTRA MULTILINE 5X4W	Name	ASTRA MULTILINE 5X4W	Number	1								
Line	Astra Industries 2011	Date	14-07-2011	Position									
Efficiency	100.00%	Coordinate system	C-G	Total Flux	976.40 lm								
Luminous Intensity Table cd/klm													
Table 2/6													
	C 130.00	C 140.00	C 150.00	C 160.00	C 170.00	C 180.00	C 190.00	C 200.00	C 210.00	C 220.00	C 230.00	C 240.00	C 250.00
G 0.0	494.24	494.24	494.24	494.24	494.24	494.24	494.24	494.24	494.24	494.24	494.24	494.24	494.24
G 1.0	493.82	493.82	493.39	493.39	493.39	493.00	493.82	493.82	493.82	494.24	494.24	494.24	494.24
G 2.0	492.97	492.79	492.54	492.48	492.54	491.30	493.39	493.39	493.28	493.82	493.82	493.82	493.82
G 3.0	491.47	491.06	491.05	490.41	491.26	490.02	492.12	492.54	492.54	493.18	492.97	493.39	493.39
G 4.0	489.71	489.56	489.14	488.47	488.78	488.28	490.51	491.27	490.85	492.12	491.69	492.12	491.89
G 5.0	487.87	487.01	486.98	486.58	486.91	485.77	488.85	489.40	489.15	490.42	490.10	490.84	490.84
G 6.0	485.32	484.84	484.04	482.86	483.18	482.69	486.18	487.03	486.68	488.30	488.01	489.15	489.01
G 7.0	482.49	481.44	481.08	479.98	479.94	479.61	483.81	484.30	484.19	485.93	485.75	486.60	486.60
G 8.0	479.58	478.09	477.66	476.37	476.64	475.30	480.67	481.44	481.37	483.14	483.20	484.47	484.47
G 9.0	476.46	474.25	473.84	472.13	472.55	470.88	477.06	477.89	478.12	479.67	479.80	481.71	481.93
G 10.0	472.33	470.21	469.55	467.02	468.30	467.05	473.03	473.92	474.03	475.98	476.75	478.53	478.82
G 11.0	467.89	466.03	464.79	462.07	463.62	461.99	468.53	469.63	470.06	472.59	474.25	475.13	475.54
G 12.0	463.67	461.49	460.09	456.97	457.73	455.54	463.70	465.38	465.36	467.92	468.76	471.31	472.19
G 13.0	458.54	455.18	454.27	451.71	452.34	450.52	458.37	459.88	460.30	463.35	464.94	467.01	467.59
G 14.0	453.40	450.14	448.85	446.05	446.60	444.51	452.24	454.39	455.63	458.51	460.70	463.09	464.17
G 15.0	447.92	445.03	442.82	439.85	440.66	438.55	446.74	449.18	450.08	452.73	454.91	458.57	459.38
G 16.0	442.82	438.20	436.35	432.49	434.02	432.45	440.79	442.95	444.18	447.36	450.08	453.90	454.50
G 17.0	436.66	432.36	430.97	426.82	426.55	423.41	433.98	436.69	438.67	442.01	444.14	448.48	449.66
G 18.0	430.92	425.76	424.08	419.31	421.08	417.95	427.21	430.18	430.85	435.79	439.04	442.86	443.92
G 19.0	424.11	419.89	416.87	412.49	412.96	409.54	420.97	423.41	425.02	429.66	432.63	437.09	438.62
G 20.0	417.62	412.53	409.84	405.15	404.90	402.63	412.91	416.18	418.22	423.63	425.03	431.40	432.60
G 21.0	411.11	404.59	401.75	396.50	398.46	395.82	405.68	408.90	411.26	416.35	419.85	424.65	426.30
G 22.0	404.04	398.05	394.76	389.48	390.50	387.03	398.30	401.25	404.52	409.70	413.14	418.45	420.83
G 23.0	396.28	390.64	387.01	382.29	381.48	378.70	390.60	393.50	397.05	402.56	405.29	411.73	413.95
G 24.0	389.85	382.96	379.83	374.36	374.13	371.34	382.69	385.80	389.27	395.10	399.26	404.99	407.58
G 25.0	381.76	375.23	372.10	365.38	365.63	362.03	374.52	378.80	381.39	387.63	391.63	397.82	399.21
G 26.0	374.60	366.84	363.99	357.71	356.58	354.63	366.60	370.81	373.40	379.94	384.23	390.72	393.61
G 27.0	366.92	358.79	357.02	348.56	349.01	345.23	358.19	362.60	365.00	372.68	376.43	384.23	386.84
G 28.0	359.91	351.23	347.64	340.74	340.95	336.62	349.66	354.78	357.26	364.27	369.76	376.92	380.17
G 29.0	351.20	343.03	339.42	332.66	332.52	328.38	340.31	345.00	349.11	356.32	362.02	369.19	372.55
G 30.0	343.21	335.35	330.24	324.13	324.06	320.90	333.42	338.28	341.77	348.35	354.41	361.48	364.72
G 31.0	335.68	326.66	323.72	315.94	315.58	312.50	323.58	329.47	332.69	341.17	344.94	353.61	357.43
G 32.0	328.08	319.25	315.11	307.68	307.18	304.09	316.74	321.84	325.48	333.08	337.97	345.90	350.52
G 33.0	318.98	311.32	307.51	298.93	299.27	296.61	308.17	314.15	317.22	326.22	329.96	338.16	341.03
G 34.0	312.01	303.18	298.77	291.07	291.73	288.19	300.91	305.75	309.14	316.62	321.88	330.51	333.98
G 35.0	303.56	293.14	290.88	284.10	282.10	279.74	292.52	297.50	301.02	309.25	314.00	323.50	326.06
G 36.0	296.89	287.19	282.12	276.30	275.56	272.57	284.67	289.21	293.11	300.91	306.38	314.07	318.33
G 37.0	287.19	279.38	275.00	268.24	266.93	264.53	276.72	281.13	286.02	292.60	298.91	306.31	310.05
G 38.0	280.46	272.80	267.29	260.60	260.14	256.88	269.76	273.62	278.28	285.38	292.01	299.13	302.96
G 39.0	272.33	264.07	259.56	253.05	253.08	249.31	261.37	266.16	269.66	277.46	282.32	290.85	295.03
G 40.0	266.02	256.22	251.92	246.45	244.93	241.05	253.53	257.81	261.63	269.67	274.09	282.28	286.11
G 41.0	257.46	247.98	244.67	238.16	237.31	235.86	246.87	249.94	254.76	262.17	268.35	275.27	279.34
G 42.0	249.86	241.21	237.01	230.83	229.89	226.85	239.58	242.50	246.27	254.38	259.86	267.37	271.41
G 43.0	243.32	233.52	229.84	224.32	220.82	217.97	232.23	235.05	239.61	247.64	252.17	259.64	263.61
G 44.0	235.79	226.70	224.02	214.75	211.83	208.28	224.18	228.00	232.64	240.24	244.91	252.09	256.72
G 45.0	228.59	220.77	216.34	207.27	204.37	201.37	214.58	221.49	226.17	232.82	237.24	245.33	248.66
G 46.0	221.24	213.35	209.43	198.89	195.79	192.44	206.21	212.25	218.95	225.35	230.43	237.78	241.59
G 47.0	214.08	207.28	200.06	190.47	187.91	183.29	198.50	204.53	210.81	219.03	222.77	230.37	233.35
G 48.0	207.16	198.84	192.73	182.25	180.89	176.27	190.06	197.35	202.74	211.62	216.07	223.13	225.99
G 49.0	200.35	192.42	183.73	175.19	172.08	168.12	181.81	187.79	194.98	203.53	208.99	215.80	218.62
G 50.0	193.49	184.34	176.03	166.36	164.19	160.66	173.90	180.43	186.67	197.35	202.79	208.64	211.35
G 51.0	187.23	177.06	168.57	159.66	156.93	152.93	165.92	172.63	177.71	191.04	195.65	201.53	205.57
G 52.0	180.67	168.25	160.92	150.67	149.39	145.50	158.45	164.85	170.71	184.06	189.03	195.40	197.57
G 53.0	175.03	161.18	154.23	144.51	142.76	138.98	151.79	156.34	163.00	175.23	181.65	187.74	190.83
G 54.0	167.43	154.27	146.19	138.03	135.17	131.40	143.50	148.85	155.48	168.22	174.96	181.71	183.24
G 55.0	159.68	146.64	139.57	130.60	128.75	125.00	136.48	141.24	148.09	160.54	169.32	174.67	176.64
G 56.0	152.64	139.52	132.71	123.50	121.88	117.84	129.83	134.22	141.25	152.95	162.07	169.01	170.56
G 57.0	144.86	132.55	124.69	116.72	114.63	111.74	122.03	126.92	133.91	145.51	153.79	162.41	163.22
G 58.0	138.41	126.22	118.60	110.12	108.65	106.04	117.08	121.84	126.64	138.24	147.86	155.19	157.40
G 59.0	131.03	119.23	112.42	103.44	102.25	99.12	109.77	115.27	119.82	131.08	140.51	149.46	150.41
G 60.0	125.05	112.64	105.26	98.13	96.05	93.23	103.50	108.34	113.55	123.96	132.52	143.95	143.64
G 61.0	117.48	105.73	100.20	91.82	90.28	87.79	96.32	101.87	106.34	117.52	126.15	137.00	137.99
G 62.0	110.43	98.58	93.08	85.75	84.08	82.03	91.59	95.93	99.71	111.78	119.10	130.94	131.53
G 63.0	104.77	93.14	86.82	80.51	78.92	76.36	84.11	89.90	93.76	105.01	113.232		

Luminaire		Measur.							Lamp	
Code	ASTRA MULTILINE 5X4W	Code	CL673/11-06I					Code	1006B/CL673/11-06L	
Name	ASTRA MULTILINE 5X4W	Name	ASTRA MULTILINE 5X4W					Number	1	
Line	Astra Industries 2011	Date	14-07-2011					Position		
Efficiency	100.00%	Coordinate system	C-G					Total Flux	976.40 lm	
Luminous Intensity Table cd/klm Table 3/6										
	C 260.00	C 270.00	C 280.00	C 290.00	C 300.00	C 310.00	C 320.00	C 330.00	C 340.00	C 350.00
G 0.0	494.24	494.24	494.24	494.24	494.24	494.24	494.24	494.24	494.24	494.24
G 1.0	494.24	494.24	494.24	494.67	494.67	494.24	494.67	494.24	494.67	494.73
G 2.0	494.02	493.82	493.82	494.24	494.24	494.24	494.67	493.82	494.24	494.24
G 3.0	493.39	493.25	493.39	493.69	493.82	493.39	494.24	492.97	493.53	493.39
G 4.0	492.54	492.12	492.54	492.54	492.54	492.54	492.96	492.12	492.54	491.85
G 5.0	491.27	491.10	491.51	491.27	491.52	491.05	491.44	490.25	491.26	490.47
G 6.0	489.83	489.37	489.72	489.57	489.99	489.32	489.78	488.29	489.14	488.37
G 7.0	487.45	487.25	487.87	487.71	487.44	487.02	487.58	486.17	486.58	485.74
G 8.0	485.32	485.18	485.90	485.59	485.32	484.69	485.26	483.18	483.89	483.22
G 9.0	482.78	482.54	483.20	482.56	482.78	481.49	481.91	479.79	481.07	478.93
G 10.0	480.03	479.80	480.41	479.79	480.03	478.09	478.47	476.52	476.74	475.09
G 11.0	476.83	476.83	477.78	476.39	476.39	474.69	474.68	472.57	473.43	471.43
G 12.0	473.09	472.96	474.03	473.01	473.04	470.44	470.89	467.86	468.26	466.59
G 13.0	469.19	469.19	470.04	468.86	468.34	466.62	466.17	463.22	463.98	461.48
G 14.0	465.79	465.16	465.74	465.06	464.50	461.72	461.92	457.69	458.94	456.83
G 15.0	461.33	460.70	461.55	460.23	459.82	456.84	455.96	453.29	453.34	451.57
G 16.0	456.45	456.41	457.30	455.58	455.57	451.50	451.28	447.60	447.45	445.33
G 17.0	451.50	451.36	452.46	450.47	449.62	446.22	446.18	442.06	440.54	438.52
G 18.0	446.44	446.28	447.11	444.88	443.73	440.69	439.80	435.17	435.62	432.57
G 19.0	441.14	441.15	441.79	439.42	438.14	434.48	433.25	428.62	428.61	425.46
G 20.0	436.45	435.65	436.07	433.82	432.62	428.37	426.61	421.78	420.96	418.36
G 21.0	429.70	429.86	430.41	428.09	426.80	422.25	420.29	414.64	413.44	411.01
G 22.0	423.12	423.46	423.93	422.80	420.00	415.75	412.87	407.33	407.00	403.30
G 23.0	417.34	417.12	417.77	416.13	413.75	408.49	405.83	401.84	399.48	394.80
G 24.0	411.70	411.16	412.02	408.74	407.08	400.87	398.29	394.08	391.45	387.69
G 25.0	403.32	403.77	405.16	402.62	400.32	393.64	390.78	386.05	383.78	379.34
G 26.0	398.03	397.58	399.00	395.21	392.33	386.96	384.09	377.62	375.76	370.51
G 27.0	391.21	389.59	391.23	388.47	385.75	379.67	375.74	369.68	367.96	364.30
G 28.0	383.44	384.23	384.63	380.35	379.10	372.18	368.60	361.34	359.62	355.78
G 29.0	376.03	376.07	377.38	373.10	370.70	364.20	360.58	355.32	351.93	347.63
G 30.0	368.90	368.59	369.27	366.08	363.04	357.19	353.41	346.22	343.76	339.19
G 31.0	361.47	362.04	361.51	358.42	355.19	349.03	345.47	337.85	335.55	330.87
G 32.0	353.70	354.50	353.72	351.62	347.63	341.55	336.54	329.11	327.13	323.43
G 33.0	346.22	346.06	347.54	343.55	339.64	332.58	329.31	321.34	319.30	314.24
G 34.0	338.24	337.94	339.17	335.66	331.86	325.11	321.04	314.63	310.54	306.22
G 35.0	330.38	331.07	331.76	327.66	324.78	317.39	312.98	305.12	303.14	298.72
G 36.0	324.19	322.91	323.38	318.78	316.48	310.02	305.37	298.00	294.55	290.59
G 37.0	315.31	315.04	316.20	311.91	309.38	301.60	296.66	290.30	286.59	283.49
G 38.0	308.31	306.95	308.34	303.90	300.50	294.15	288.68	282.42	277.76	274.60
G 39.0	299.98	299.03	300.45	295.96	292.58	286.35	281.35	273.92	270.84	267.30
G 40.0	291.46	291.07	291.58	288.05	284.17	277.46	273.53	266.79	263.90	259.07
G 41.0	280.84	284.10	284.27	280.95	277.39	270.45	265.72	258.98	255.98	251.86
G 42.0	276.40	274.32	277.34	272.28	269.55	262.68	257.53	251.75	248.57	242.74
G 43.0	268.37	267.54	268.66	265.44	261.93	254.13	250.53	243.98	240.72	233.18
G 44.0	259.76	259.73	261.25	257.43	254.23	247.33	242.90	236.85	231.81	225.93
G 45.0	253.82	251.98	253.18	250.01	246.58	239.81	235.62	228.81	223.23	216.54
G 46.0	245.33	245.64	246.34	242.34	239.25	233.39	229.15	219.80	213.62	207.31
G 47.0	237.71	237.52	238.46	235.01	232.43	225.83	221.17	212.18	205.56	200.07
G 48.0	231.21	229.82	231.30	226.90	225.12	218.10	214.95	203.10	196.08	189.66
G 49.0	223.60	222.37	223.95	220.53	217.54	210.96	206.35	195.64	188.81	182.17
G 50.0	215.83	215.87	216.38	212.67	210.57	203.83	199.01	186.13	180.71	174.72
G 51.0	209.06	207.76	209.00	205.35	203.73	198.01	191.07	180.23	172.86	166.35
G 52.0	201.91	201.22	202.41	199.06	196.52	190.90	183.79	171.52	164.82	158.85
G 53.0	194.61	193.74	194.65	192.21	190.33	183.99	174.88	163.73	158.00	151.73
G 54.0	188.34	186.45	187.89	184.99	183.27	177.17	168.11	156.13	151.28	144.43
G 55.0	180.59	179.23	181.39	178.28	176.11	168.72	160.39	148.61	144.16	137.05
G 56.0	173.70	173.07	174.34	171.31	169.27	162.31	152.71	141.58	135.56	130.05
G 57.0	167.63	166.18	168.21	164.63	162.55	155.69	145.39	133.56	129.63	122.66
G 58.0	160.83	159.48	160.76	157.96	156.29	147.53	138.87	126.69	121.97	116.34
G 59.0	154.15	152.99	154.20	151.80	150.61	139.02	131.27	120.43	116.20	109.64
G 60.0	146.70	146.67	148.24	144.94	143.72	132.56	123.82	113.52	109.01	103.28
G 61.0	141.01	139.90	141.67	139.17	137.69	126.17	117.67	107.50	102.54	97.62
G 62.0	134.54	134.36	135.21	132.16	131.49	118.67	112.01	101.10	97.48	91.01
G 63.0	128.75	128.11	128.85	126.52	123.52	111.67	104.65	93.94	90.51	85.45
G 64.0	122.40	120.63	122.88	120.35	116.50	104.81	97.23	88.29	84.78	79.85
G 65.0	116.05	114.58	116.72	114.13	109.93	99.16	90.85	82.16	78.49	74.01
G 66.0	109.72	108.67	109.80	108.04	103.62	92.21	84.81	75.42	72.68	68.54
G 67.0	104.31	103.05	105.00	102.07	96.45	85.62	78.41	70.17	67.08	63.29
G 68.0	98.25	96.43	98.15	95.90	89.32	79.22	72.39	64.47	62.01	58.74
G 69.0	91.56	90.56	92.09	89.72	83.57	72.91	66.31	59.19	56.44	53.85
G 70.0	85.47	84.87	86.45	83.98	77.80	66.76	60.66	53.72	51.93	49.17
G 71.0	79.61	79.69	80.71	77.35	70.76	60.43	54.70	48.43	47.19	44.66
G 72.0	74.42	73.16	75.03	70.56	65.11	54.74	49.07	44.29	42.53	40.52

Luminaire				Measurem.				Lamp							
Code	ASTRA MULTILINE 5X4W			Code	CL673/11-06I			Code	1006B/CL673/11-06L						
Name	ASTRA MULTILINE 5X4W			Name	ASTRA MULTILINE 5X4W			Number	1						
Line	Astra Industries 2011			Date	14-07-2011			Position							
Efficiency	100.00%			Coordinate system	C-G			Total Flux	976.40 lm						
Luminous Intensity Table cd/klm														Table 4/6	
	C 0.00	C 10.00	C 20.00	C 30.00	C 40.00	C 50.00	C 60.00	C 70.00	C 80.00	C 90.00	C 100.00	C 110.00	C 120.00		
G 73.0	31.99	33.43	33.09	35.91	38.89	46.03	51.93	61.14	62.17	62.54	61.19	58.56	50.37		
G 74.0	29.02	29.79	29.47	31.29	34.10	39.96	46.47	55.75	56.26	57.45	56.35	52.91	44.88		
G 75.0	26.15	26.74	25.97	27.33	29.57	35.33	41.25	49.47	51.05	51.75	50.44	47.14	39.18		
G 76.0	22.83	23.67	23.56	24.58	25.50	30.62	35.76	43.80	46.01	46.81	45.25	42.24	34.06		
G 77.0	19.77	20.42	19.94	20.59	21.76	25.60	30.24	38.59	41.20	40.72	41.11	36.28	28.66		
G 78.0	17.61	17.96	17.28	18.23	18.36	21.37	26.22	32.78	35.82	36.49	35.53	31.24	23.66		
G 79.0	15.17	15.06	14.69	15.04	15.26	17.81	20.94	27.54	30.81	30.71	30.44	25.99	19.71		
G 80.0	11.36	11.97	12.06	12.52	12.54	13.68	17.02	22.37	26.06	25.56	24.61	21.19	15.58		
G 81.0	10.55	10.02	9.26	9.55	10.24	11.18	12.91	17.49	21.00	21.00	19.01	16.56	12.19		
G 82.0	10.24	9.82	8.86	7.74	7.66	8.66	9.48	13.20	15.86	16.04	15.32	11.88	8.94		
G 83.0	9.67	9.38	8.46	7.43	5.99	6.22	6.84	9.65	11.97	12.12	11.13	8.95	6.43		
G 84.0	8.64	8.36	7.62	7.02	5.70	4.35	4.52	6.65	8.67	9.24	8.49	5.94	4.57		
G 85.0	7.00	7.16	6.50	6.23	5.03	4.05	2.85	4.08	5.80	6.51	5.36	3.69	3.32		
G 86.0	5.52	5.65	4.96	5.03	4.16	3.63	2.54	2.39	3.66	4.27	3.23	2.34	3.02		
G 87.0	3.48	3.91	3.30	3.63	2.86	2.70	1.99	1.49	1.49	2.40	1.40	1.81	2.13		
G 88.0	2.03	2.39	1.92	2.30	1.63	1.86	1.28	1.13	0.56	1.00	0.83	1.27	1.31		
G 89.0	0.65	0.74	0.79	0.91	0.57	0.83	0.51	0.52	0.28	0.16	0.32	0.51	0.28		
G 90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

Luminaire					Measurem.					Lamp				
Code	ASTRA MULTILINE 5X4W				Code	CL673/11-06I				Code	1006B/CL673/11-06L			
Name	ASTRA MULTILINE 5X4W				Name	ASTRA MULTILINE 5X4W				Number	1			
Line	Astra Industries 2011				Date	14-07-2011				Position				
Efficiency	100.00%				Coordinate system	C-G				Total Flux	976.40 lm			
Luminous Intensity Table cd/klm										Table 5/6				
	C 130.00	C 140.00	C 150.00	C 160.00	C 170.00	C 180.00	C 190.00	C 200.00	C 210.00	C 220.00	C 230.00	C 240.00	C 250.00	
G 73.0	43.79	37.25	34.66	32.83	32.59	31.40	36.21	37.79	39.11	44.72	49.50	59.15	66.40	
G 74.0	38.20	32.78	30.68	29.49	29.14	28.32	32.28	34.03	34.77	39.58	44.76	53.19	59.74	
G 75.0	33.34	28.25	27.33	25.82	26.25	25.22	28.52	30.31	30.71	34.13	38.80	47.30	53.86	
G 76.0	28.61	24.47	23.86	22.76	22.89	22.53	25.88	26.70	26.88	29.54	33.99	42.13	48.80	
G 77.0	24.43	21.26	20.43	19.81	20.03	19.92	23.04	23.33	23.44	25.96	29.14	36.01	42.60	
G 78.0	20.17	17.80	17.48	17.16	17.84	17.63	20.35	20.47	20.63	22.73	24.69	31.32	36.91	
G 79.0	16.77	15.11	15.29	14.97	14.98	13.86	17.81	17.71	17.47	18.78	20.97	26.26	32.19	
G 80.0	13.39	12.48	12.73	11.97	12.22	11.71	14.89	15.64	15.14	15.53	17.17	21.54	26.67	
G 81.0	10.61	10.18	9.75	10.17	11.08	11.35	11.87	12.87	12.70	13.07	13.82	17.52	21.68	
G 82.0	8.46	7.53	8.73	9.92	10.81	11.05	11.03	10.15	9.74	10.53	10.71	13.50	17.29	
G 83.0	5.85	6.95	8.45	9.44	10.22	10.37	10.82	9.83	8.46	8.02	7.98	9.98	12.07	
G 84.0	5.11	6.62	7.88	8.77	9.27	9.18	10.30	9.52	8.22	6.69	5.77	7.39	8.65	
G 85.0	4.74	5.81	6.78	6.95	7.56	7.60	9.19	8.66	7.69	6.45	4.82	4.87	6.03	
G 86.0	4.09	4.71	5.40	4.99	5.84	5.53	7.27	7.59	6.58	5.87	4.48	3.30	3.75	
G 87.0	2.86	2.96	3.65	3.31	4.20	3.28	5.78	6.14	5.26	4.99	3.82	2.97	2.26	
G 88.0	1.89	1.52	2.16	1.72	2.04	1.46	3.73	4.32	3.79	3.79	2.76	2.44	1.73	
G 89.0	0.54	0.32	0.57	0.27	0.50	0.25	2.24	2.56	2.14	2.40	1.87	1.80	1.28	
G 90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Luminaire		Measur.				Lamp				
Code	ASTRA MULTILINE 5X4W	Code	CL673/11-06I			Code	1006B/CL673/11-06L			
Name	ASTRA MULTILINE 5X4W	Name	ASTRA MULTILINE 5X4W			Number	1			
Line	Astra Industries 2011	Date	14-07-2011			Position				
Efficiency	100.00%	Coordinate system	C-G			Total Flux	976.40 lm			
Luminous Intensity Table cd/klm Table 6/6										
	C 260.00	C 270.00	C 280.00	C 290.00	C 300.00	C 310.00	C 320.00	C 330.00	C 340.00	C 350.00
G 73.0	69.05	68.11	68.74	63.45	59.47	49.02	44.45	39.54	38.78	36.60
G 74.0	63.40	61.82	63.65	59.95	52.55	44.17	38.77	35.20	34.29	33.32
G 75.0	57.69	56.18	58.20	53.57	47.72	38.74	34.05	31.02	30.51	29.74
G 76.0	52.14	51.39	52.61	47.51	41.79	33.92	30.02	26.93	27.42	26.08
G 77.0	46.96	46.24	47.56	42.54	36.52	29.14	26.28	24.09	23.58	23.37
G 78.0	42.21	40.52	42.09	37.02	30.96	24.43	22.45	20.78	20.83	20.46
G 79.0	37.70	36.26	36.75	31.67	25.61	20.77	18.95	17.99	18.07	17.91
G 80.0	31.73	30.83	31.16	26.40	21.37	16.35	15.44	14.94	15.12	14.82
G 81.0	26.93	25.59	25.81	21.13	17.41	14.05	12.95	12.63	12.35	11.71
G 82.0	21.46	21.25	20.46	16.29	13.29	10.76	10.40	9.39	9.64	10.30
G 83.0	16.08	16.02	16.30	13.15	9.86	8.13	7.70	7.88	9.15	10.02
G 84.0	12.50	12.34	12.23	8.69	7.17	5.54	6.25	7.59	8.79	9.48
G 85.0	8.92	8.69	9.17	5.91	4.85	4.42	5.99	7.07	8.16	8.64
G 86.0	6.23	6.03	6.09	3.59	2.93	4.10	5.36	5.95	7.08	7.43
G 87.0	3.75	3.90	3.70	1.84	2.70	3.48	4.39	4.69	5.57	5.48
G 88.0	2.41	2.10	2.04	1.55	2.25	2.66	3.41	3.47	4.06	3.82
G 89.0	1.00	0.81	0.87	1.15	1.53	1.65	2.16	2.09	2.46	2.26
G 90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

