

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: McGRAW-EDISON

Report Number: P151795

Luminaire Tested: **TLM-F02-LED-E1-SL4-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P151795
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33728)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TLM-F02-LED-E1-SL4-HSS
Description: TALON MEDIUM LED SITE LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND
HOUSE SIDE SHIELD
Light Source: (14) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3359.6 lumens
Efficiency: N/A
Efficacy: 61.1 lumens/watt
Spacing Criteria (0/90/45): 4.24 / 0.98 / 4.1
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
CIE Type: Direct

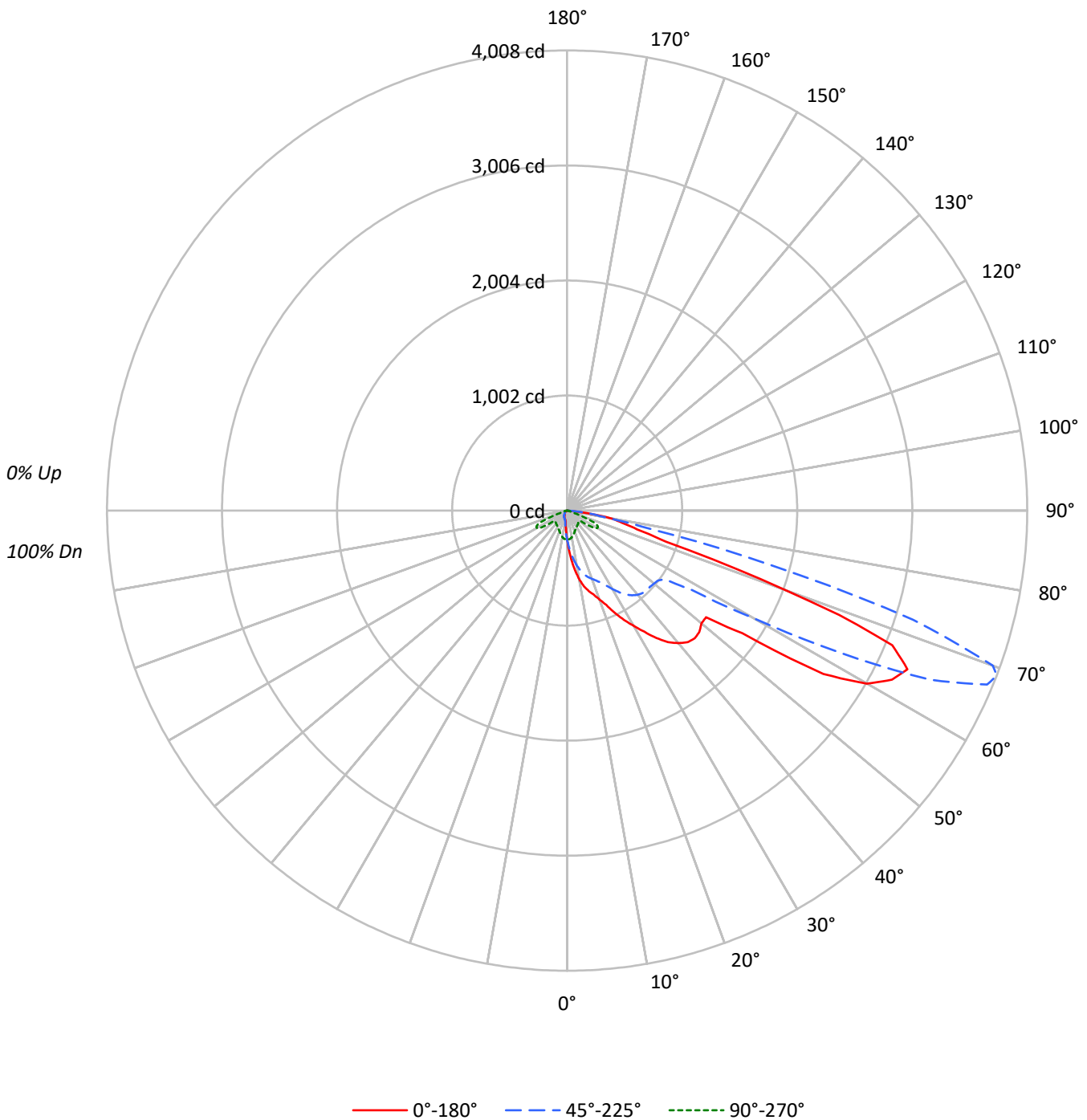
Input Watts (W): 55
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	105	99	93	88	102	96	91	86	92	87	83	88	84	81	84	81	78	76
2	91	80	71	63	88	78	70	62	74	67	61	71	65	59	68	62	58	55
3	80	66	55	47	77	64	54	46	61	52	45	58	51	44	55	49	43	41
4	71	56	44	36	68	54	44	35	51	42	35	49	41	34	46	39	33	31
5	64	48	36	28	61	46	36	28	44	35	27	42	33	27	40	32	27	24
6	58	42	31	23	56	40	30	22	38	29	22	37	28	22	35	27	22	19
7	53	37	26	19	51	36	26	19	34	25	18	32	24	18	31	24	18	16
8	49	33	23	16	47	32	22	16	31	22	16	29	21	15	28	21	15	13
9	45	30	20	14	44	29	20	14	28	19	13	27	19	13	25	18	13	11
10	42	27	18	12	41	27	18	12	25	17	12	24	17	12	23	17	12	10

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	8275	8275	8275
5°	14145	8163	4342
10°	20141	7800	2789
15°	24496	7172	2526
20°	28578	6685	2291
25°	35374	6399	2019
30°	43653	6260	1721
35°	53955	6200	1445
40°	64185	6302	1337
45°	72556	6573	1370
50°	77527	7231	1258
55°	105939	12517	751
60°	196712	19851	541
65°	252396	21448	509
70°	190575	8869	582
75°	79346	3403	693
80°	72468	3212	939
85°	6400	2882	1647



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.1	0.8
10°-20°	89.9	2.7
20°-30°	172.1	5.1
30°-40°	286.2	8.5
40°-50°	387.2	11.5
50°-60°	605.6	18.0
60°-70°	1245.1	37.1
70°-80°	501.0	14.9
80°-90°	46.4	1.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	288.1	8.6
0°-40°	574.2	17.1
0°-60°	1567.1	46.6
0°-90°	3359.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3359.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	254	254	254	254	254	
5°	432	368	249	158	133	47
15°	725	575	212	79	75	207
25°	983	692	178	63	56	460
35°	1355	894	156	45	36	850
45°	1573	978	142	29	30	1202
55°	1863	1040	220	19	13	1878
65°	3270	3487	278	9	7	2996
75°	630	1836	27	4	6	844
85°	17	74	8	3	4	106
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	253.7	253.7	253.7	253.7	253.7	253.7	253.7	253.7	253.7	253.7	253.7
2.5°	338.5	334.6	330.2	330.2	324.7	324.7	321.4	312.6	311.5	306.5	301.6
5°	432.0	428.7	423.2	418.3	413.9	406.2	400.7	390.2	378.6	367.6	357.7
7.5°	523.4	521.7	511.8	510.2	503.0	490.4	479.4	463.9	444.1	428.7	410.6
10°	608.1	604.3	602.1	592.7	582.3	568.5	551.5	532.7	509.6	485.4	459.5
12.5°	675.3	673.1	663.2	659.3	648.3	634.6	613.1	588.9	565.8	534.4	504.1
15°	725.4	721.5	714.9	708.9	695.6	683.5	663.7	637.3	609.2	575.1	538.8
17.5°	767.2	760.0	758.4	749.0	735.3	721.0	698.9	674.7	641.7	607.6	568.0
20°	823.3	813.4	810.1	796.4	780.4	760.6	735.3	705.0	670.3	632.9	592.2
22.5°	889.4	882.2	875.1	862.9	842.6	814.5	777.6	744.6	700.6	659.3	615.3
25°	982.9	976.9	965.3	948.8	923.5	889.9	845.3	796.9	745.2	692.3	640.6
27.5°	1073.7	1068.2	1060.0	1047.3	1018.7	981.8	926.8	865.2	799.7	735.8	678.6
30°	1159.0	1154.1	1145.8	1133.2	1107.9	1071.5	1009.3	943.3	861.8	787.6	718.8
32.5°	1250.9	1249.3	1239.9	1221.8	1199.8	1150.8	1083.1	1012.1	929.5	843.7	763.3
35°	1355.0	1342.3	1333.5	1315.3	1277.9	1225.6	1146.4	1068.8	981.8	893.8	804.1
37.5°	1443.0	1430.9	1419.9	1396.8	1351.1	1284.5	1194.8	1109.5	1019.8	930.1	838.7
40°	1507.4	1501.4	1488.1	1457.9	1406.7	1327.4	1230.6	1137.6	1047.3	957.1	866.8
42.5°	1555.3	1545.9	1531.1	1499.7	1439.2	1348.9	1244.9	1149.1	1060.0	973.6	885.0
45°	1572.9	1565.2	1551.4	1517.3	1451.8	1355.0	1244.3	1145.8	1060.5	978.5	897.1
47.5°	1562.4	1554.7	1542.6	1510.7	1446.3	1347.8	1234.4	1136.5	1055.0	980.2	908.1
50°	1527.8	1523.4	1514.0	1487.0	1429.3	1334.0	1225.6	1131.5	1053.9	988.4	923.5
52.5°	1524.5	1521.7	1510.2	1483.2	1424.3	1329.6	1224.5	1134.3	1063.3	998.9	934.5
55°	1862.9	1823.9	1736.4	1662.1	1539.9	1394.6	1280.1	1178.8	1102.9	1040.2	995.0
57.5°	2647.7	2589.4	2474.4	2332.9	2052.3	1776.5	1555.8	1396.2	1317.5	1288.9	1306.0
60°	3015.4	3004.9	2986.7	2919.6	2776.0	2538.8	2274.6	1989.0	1874.5	1864.6	1899.3
62.5°	3189.8	3183.2	3188.7	3180.5	3135.9	3066.5	2990.6	2867.3	2754.0	2680.8	2525.6
65°	3270.2	3274.6	3306.0	3330.7	3336.2	3354.4	3410.0	3563.5	3675.8	3487.0	3056.1
67.5°	3066.0	3091.9	3164.0	3254.2	3359.9	3462.3	3627.4	3951.0	4181.6	3959.8	3347.8
69°	2538.2	2550.9	2727.0	2897.0	3155.2	3335.7	3575.1	3999.4	4258.6	4008.2	3324.7
70°	1998.3	2009.9	2198.6	2429.8	2866.2	3098.5	3411.6	3917.4	4186.5	3943.8	3205.8
72.5°	901.5	885.0	951.6	1075.4	1549.8	1918.5	2466.1	3173.9	3454.0	3159.6	2398.4
75°	629.6	622.4	629.6	630.2	703.9	908.1	1145.8	1720.4	2127.7	1836.0	1145.8
77.5°	487.6	482.7	477.7	472.2	481.0	538.8	561.9	610.3	792.5	749.6	437.0
80°	385.8	381.4	393.5	389.6	389.6	396.3	391.8	373.7	339.6	314.8	281.8
82.5°	179.4	180.5	180.5	195.9	236.1	275.7	288.4	270.2	240.0	204.2	164.6
85°	17.1	19.3	32.5	50.1	99.6	112.3	112.8	93.6	93.6	73.7	59.4
87.5°	0.0	0.6	0.6	0.6	5.0	13.8	11.6	3.3	1.7	1.7	2.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	253.7	253.7	253.7	253.7	253.7	253.7	253.7	253.7	253.7	253.7	253.7
2.5°	292.8	291.1	284.5	277.9	271.9	265.3	259.2	253.2	246.6	241.6	235.5
5°	342.3	330.2	316.5	303.2	290.0	276.3	262.0	249.3	236.1	224.0	212.4
7.5°	392.4	368.7	350.0	326.4	304.9	283.4	263.6	243.3	224.5	206.9	190.4
10°	434.8	406.2	377.0	346.7	315.9	287.3	259.8	235.5	210.8	189.3	169.0
12.5°	469.4	433.1	397.4	359.4	324.7	288.4	254.3	225.1	195.9	171.7	150.8
15°	500.8	459.0	416.1	372.0	328.0	286.7	248.8	212.4	182.7	155.2	131.5
17.5°	526.1	478.3	429.8	380.3	333.0	284.5	241.6	203.6	169.0	140.3	117.2
20°	548.1	498.1	445.8	390.2	336.3	284.0	235.5	192.6	156.8	126.6	104.0
22.5°	568.5	518.4	462.3	402.9	341.2	283.4	230.0	184.4	146.4	116.1	93.6
25°	591.6	538.8	479.9	416.1	350.0	285.6	226.7	177.8	137.0	106.2	85.3
27.5°	617.5	561.9	500.8	432.6	361.6	290.0	225.6	170.6	128.8	96.9	78.7
30°	653.8	589.4	521.7	449.1	372.0	295.0	224.5	166.2	120.5	89.7	72.1
32.5°	685.7	616.4	544.8	466.1	383.6	299.9	224.0	160.2	112.8	82.6	67.1
35°	719.3	641.2	564.7	482.7	393.5	305.4	223.4	155.7	105.7	75.4	62.2
37.5°	748.5	662.1	580.1	497.0	404.5	310.4	224.0	151.9	99.1	69.3	57.8
40°	773.2	683.5	597.1	510.2	416.1	318.1	224.5	148.0	92.5	63.8	53.9
42.5°	795.3	703.9	615.3	525.0	429.3	326.9	227.8	144.7	87.0	58.9	50.1
45°	812.3	722.6	635.1	545.9	450.7	341.2	233.9	142.5	81.5	54.5	46.8
47.5°	829.9	750.1	668.7	579.0	482.1	363.8	244.4	142.0	77.0	51.2	44.0
50°	854.1	777.6	698.4	612.5	510.7	386.9	257.0	142.5	71.5	47.9	41.3
52.5°	871.8	805.7	736.9	670.9	579.0	457.3	306.0	152.4	68.8	45.1	38.0
55°	975.8	964.2	965.9	976.9	905.9	778.2	511.8	220.1	80.9	51.2	37.4
57.5°	1375.9	1416.6	1440.3	1439.7	1322.5	1096.8	687.4	282.9	90.3	59.4	44.6
60°	1902.0	1871.2	1827.7	1720.4	1564.6	1252.0	768.8	304.3	78.1	47.3	40.7
62.5°	2367.1	2186.5	2026.4	1852.5	1648.3	1306.0	785.3	302.7	68.2	35.8	28.6
65°	2657.1	2332.4	2073.7	1855.8	1615.3	1260.9	743.0	277.9	57.8	29.2	23.7
67.5°	2726.4	2253.7	1887.7	1609.8	1349.5	981.3	545.4	209.1	45.1	24.2	20.9
69°	2575.1	2003.3	1564.1	1248.7	981.8	651.1	337.4	132.1	34.7	22.0	19.3
70°	2368.7	1742.4	1274.1	1002.2	727.0	457.3	236.1	93.0	28.1	20.4	17.6
72.5°	1523.9	915.2	626.3	435.9	299.9	182.2	92.5	41.8	21.5	17.1	14.3
75°	591.1	338.5	245.5	186.6	145.8	101.3	56.1	27.0	18.2	14.3	11.0
77.5°	291.1	222.9	182.2	124.9	72.6	45.1	30.3	20.9	14.9	10.5	7.2
80°	230.0	153.0	91.4	56.7	42.9	32.5	23.1	17.1	11.0	6.6	5.0
82.5°	117.8	64.4	47.3	38.5	31.9	25.3	18.7	12.1	7.2	4.4	3.9
85°	36.9	27.0	24.2	23.7	22.0	18.2	13.2	7.7	4.4	2.8	2.8
87.5°	2.8	3.9	5.0	3.9	4.4	3.9	5.0	3.3	2.2	2.2	1.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	253.7	253.7	253.7	253.7	253.7	253.7	253.7	253.7	253.7	253.7	253.7
2.5°	231.1	224.5	218.5	214.6	207.5	204.7	202.0	200.9	195.9	197.0	192.6
5°	202.0	190.4	181.6	172.8	164.6	158.5	153.5	147.5	142.5	140.3	135.9
7.5°	175.6	160.7	149.1	139.8	129.9	122.2	115.6	111.2	106.8	102.4	100.2
10°	152.4	136.5	123.3	113.9	104.6	98.0	93.0	89.7	87.0	85.3	84.8
12.5°	131.0	115.6	103.5	95.2	88.1	84.8	82.6	80.9	80.4	79.8	79.8
15°	114.5	99.1	89.7	83.7	80.4	78.7	78.1	77.0	75.9	75.4	75.4
17.5°	99.1	87.5	80.9	77.6	75.9	74.8	73.7	72.6	71.5	71.0	71.0
20°	88.6	79.3	75.9	73.7	72.1	71.0	69.3	68.2	67.7	67.1	66.6
22.5°	80.4	74.3	72.1	70.4	68.2	66.6	65.5	64.4	63.3	62.7	62.2
25°	74.3	70.4	68.8	66.6	64.4	62.7	61.1	59.4	58.3	57.8	56.7
27.5°	69.9	67.1	64.9	62.2	60.0	58.3	56.7	55.0	53.9	52.8	52.3
30°	66.0	63.3	60.5	58.3	55.6	53.9	51.7	50.1	49.5	48.4	47.3
32.5°	62.2	59.4	56.7	53.9	51.2	49.0	47.9	45.7	44.6	44.0	42.9
35°	57.8	55.0	51.7	49.5	46.8	44.6	42.9	41.3	40.2	39.1	38.5
37.5°	53.9	50.6	47.3	44.6	42.4	40.2	38.5	36.9	35.8	34.7	34.1
40°	49.5	46.2	42.9	40.2	38.0	36.3	34.7	33.0	31.9	31.4	31.4
42.5°	45.7	41.8	38.5	36.3	34.7	32.5	30.8	29.2	28.6	28.1	28.6
45°	41.8	38.0	35.2	33.0	31.4	29.2	27.5	26.4	25.9	26.4	27.0
47.5°	38.5	34.7	31.9	30.3	28.6	27.0	25.3	24.2	24.2	25.3	26.4
50°	35.2	31.4	29.2	28.1	26.4	24.8	22.6	22.0	22.6	23.7	24.8
52.5°	31.9	27.5	25.9	25.3	23.7	22.0	20.4	19.8	20.4	21.5	20.9
55°	28.6	24.2	23.7	23.1	21.5	19.3	17.6	17.6	17.6	17.1	16.0
57.5°	27.5	21.5	20.9	20.4	18.7	16.5	15.4	14.3	13.8	12.1	11.6
60°	28.6	19.3	19.3	18.2	16.5	14.3	12.7	11.0	9.9	8.8	8.8
62.5°	23.1	17.6	17.1	16.0	13.8	11.6	9.9	8.3	7.7	7.2	7.2
65°	18.7	16.0	14.9	13.2	11.6	9.4	7.7	6.6	6.1	6.1	6.6
67.5°	17.1	14.3	12.7	11.0	9.4	7.2	6.1	5.5	5.5	6.1	6.1
69°	16.0	13.2	11.6	9.9	8.3	6.6	5.5	5.5	5.5	5.5	6.1
70°	14.9	12.7	11.0	9.4	7.2	5.5	5.0	5.0	5.5	5.5	6.1
72.5°	11.6	9.9	9.4	7.7	5.5	5.0	4.4	5.0	5.0	5.5	5.5
75°	8.8	7.2	7.2	6.1	4.4	3.9	3.9	4.4	4.4	5.0	5.0
77.5°	6.1	5.0	5.0	4.4	3.9	3.3	3.3	3.9	4.4	4.4	5.0
80°	4.4	3.9	3.3	3.9	3.3	2.8	3.3	3.9	3.9	4.4	4.4
82.5°	3.3	3.3	3.3	3.3	2.8	2.8	3.3	3.3	3.9	4.4	4.4
85°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	3.3	3.3	3.9	3.9
87.5°	1.7	1.7	1.7	2.2	2.2	2.8	2.8	2.8	2.8	3.3	3.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P151795

CATALOG NUMBER: TLM-F02-LED-E1-SL4-HSS

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	253.7	253.7	253.7	253.7
2.5°	191.5	191.0	188.8	189.3
5°	134.3	131.0	133.2	132.6
7.5°	98.5	98.0	97.4	98.5
10°	84.2	84.2	83.7	84.2
12.5°	79.3	79.3	79.3	79.3
15°	75.4	75.4	74.8	74.8
17.5°	71.0	71.0	71.0	70.4
20°	66.6	66.0	66.0	66.0
22.5°	61.6	61.1	61.1	61.1
25°	56.7	56.1	56.1	56.1
27.5°	51.7	51.2	50.6	50.6
30°	46.8	46.2	45.7	45.7
32.5°	41.8	41.3	40.7	40.7
35°	37.4	37.4	36.9	36.3
37.5°	33.6	33.6	33.6	33.6
40°	30.8	31.4	31.4	31.4
42.5°	29.2	29.7	30.3	30.8
45°	28.1	29.2	29.7	29.7
47.5°	27.5	28.1	28.6	28.6
50°	25.3	24.8	24.8	24.8
52.5°	20.4	19.3	18.7	18.2
55°	14.9	14.3	13.2	13.2
57.5°	10.5	10.5	9.9	9.9
60°	8.3	8.3	7.7	8.3
62.5°	7.2	7.2	7.2	7.2
65°	6.6	6.6	6.6	6.6
67.5°	6.6	6.6	6.6	6.6
69°	6.1	6.1	6.1	6.1
70°	6.1	6.1	6.1	6.1
72.5°	5.5	5.5	5.5	5.5
75°	5.0	5.5	5.5	5.5
77.5°	5.0	5.0	5.0	5.0
80°	4.4	4.4	5.0	5.0
82.5°	4.4	4.4	4.4	4.4
85°	3.9	3.9	4.4	4.4
87.5°	3.3	3.3	3.9	3.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)