

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: P151796

Luminaire Tested: **TLM-F02-LED-E1-SL4-HSS-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P151796
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-7050
Description: TALON MEDIUM LED SITE LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND
HOUSE SIDE SHIELD
Light Source: (14) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3447.3 lumens
Efficiency: N/A
Efficacy: 62.7 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

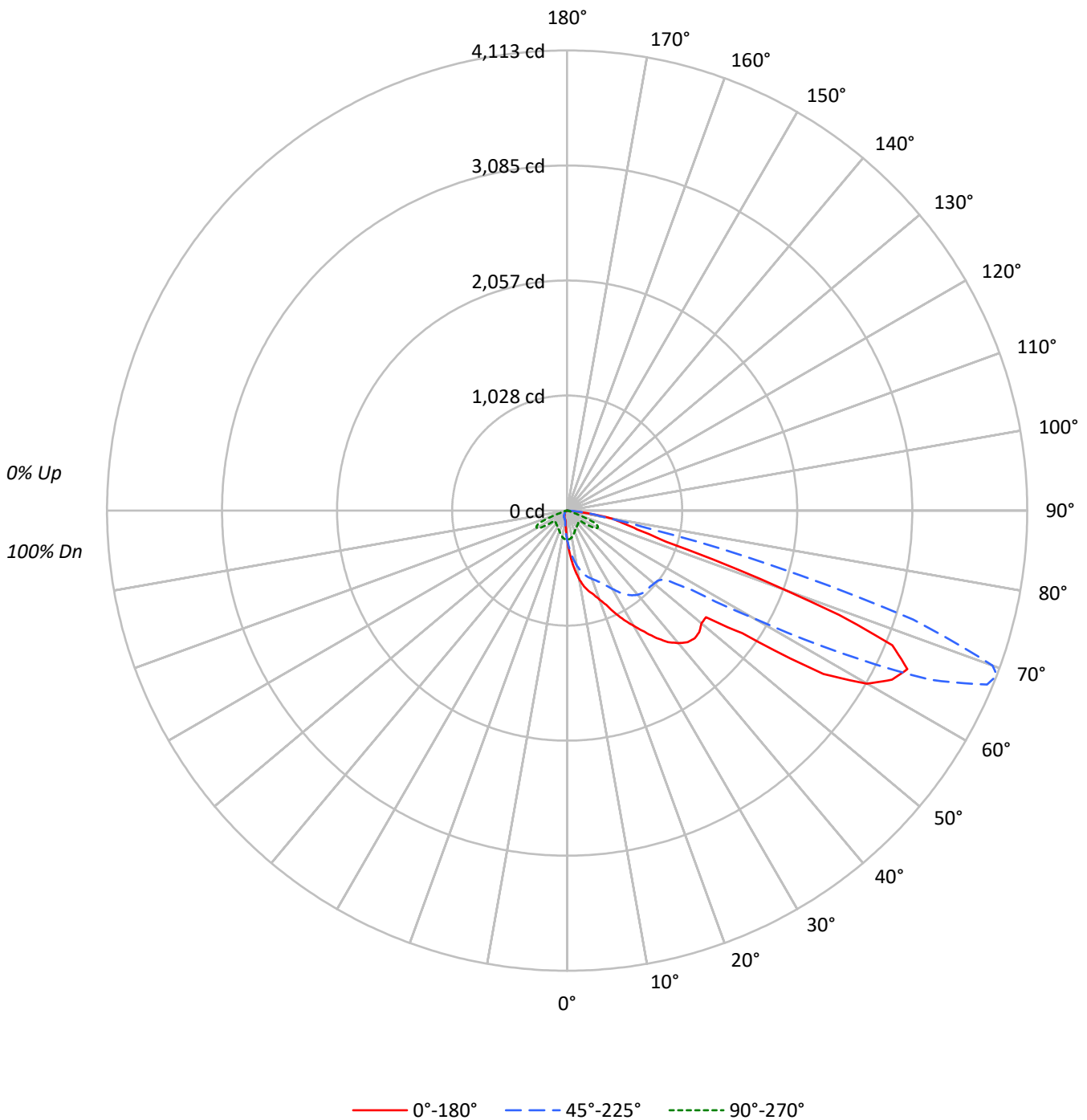
Input Watts (W): 55
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	8490	8490	8490
5°	14515	8376	4456
10°	20668	8005	2862
15°	25134	7362	2593
20°	29324	6862	2353
25°	36299	6565	2073
30°	44794	6422	1766
35°	55361	6363	1485
40°	65862	6468	1371
45°	74452	6749	1407
50°	79552	7424	1289
55°	108708	12846	773
60°	201846	20373	555
65°	258979	22012	525
70°	195553	9098	591
75°	81413	3491	706
80°	74366	3287	958
85°	6549	2957	1684



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.8	0.8
10°-20°	92.3	2.7
20°-30°	176.6	5.1
30°-40°	293.6	8.5
40°-50°	397.4	11.5
50°-60°	621.4	18.0
60°-70°	1277.6	37.1
70°-80°	514.1	14.9
80°-90°	47.6	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°	295.6	8.6
0°-40°	589.2	17.1
0°-60°	1608.0	46.6
0°-90°	3447.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3447.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	260	260	260	260	260	
5°	443	377	256	163	136	48
15°	744	590	218	81	77	213
25°	1009	710	182	64	58	472
35°	1390	917	160	46	37	872
45°	1614	1004	146	30	30	1234
55°	1912	1067	226	20	14	1927
65°	3356	3578	285	10	7	3074
75°	646	1884	28	4	6	866
85°	18	76	8	3	4	108
90°	0	0	0	0	0	



TEST NUMBER: P151796

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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	260.3	260.3	260.3	260.3	260.3	260.3	260.3	260.3	260.3	260.3	260.3
2.5°	347.3	343.3	338.8	338.8	333.2	333.2	329.8	320.8	319.6	314.5	309.5
5°	443.3	439.9	434.3	429.2	424.7	416.8	411.1	400.4	388.5	377.2	367.1
7.5°	537.0	535.4	525.2	523.5	516.2	503.2	491.9	476.1	455.7	439.9	421.3
10°	624.0	620.1	617.8	608.2	597.5	583.4	565.8	546.6	522.9	498.1	471.5
12.5°	692.9	690.6	680.5	676.5	665.2	651.1	629.1	604.2	580.5	548.3	517.3
15°	744.3	740.3	733.6	727.4	713.8	701.4	681.0	653.9	625.1	590.1	552.9
17.5°	787.2	779.9	778.2	768.6	754.5	739.8	717.2	692.3	658.5	623.4	582.8
20°	844.8	834.7	831.3	817.1	800.8	780.4	754.5	723.4	687.8	649.4	607.6
22.5°	912.6	905.2	897.9	885.5	864.6	835.8	797.9	764.1	718.9	676.5	631.4
25°	1008.6	1002.4	990.5	973.6	947.6	913.1	867.4	817.7	764.6	710.4	657.3
27.5°	1101.8	1096.1	1087.6	1074.7	1045.3	1007.5	951.0	887.7	820.5	755.0	696.3
30°	1189.3	1184.2	1175.7	1162.8	1136.8	1099.5	1035.7	967.9	884.3	808.1	737.5
32.5°	1283.6	1281.9	1272.3	1253.7	1231.1	1180.8	1111.4	1038.5	953.8	865.7	783.3
35°	1390.3	1377.3	1368.3	1349.7	1311.3	1257.6	1176.3	1096.7	1007.5	917.1	825.1
37.5°	1480.7	1468.3	1457.0	1433.3	1386.4	1318.0	1226.0	1138.5	1046.4	954.4	860.6
40°	1546.8	1540.5	1527.0	1495.9	1443.4	1362.1	1262.7	1167.3	1074.7	982.0	889.4
42.5°	1595.9	1586.3	1571.0	1538.9	1476.7	1384.1	1277.4	1179.1	1087.6	999.0	908.1
45°	1614.0	1606.1	1591.9	1556.9	1489.7	1390.3	1276.8	1175.7	1088.2	1004.1	920.5
47.5°	1603.2	1595.3	1582.9	1550.1	1484.1	1383.0	1266.7	1166.1	1082.6	1005.8	931.8
50°	1567.7	1563.1	1553.5	1525.9	1466.6	1368.9	1257.6	1161.1	1081.4	1014.2	947.6
52.5°	1564.3	1561.4	1549.6	1521.9	1461.5	1364.4	1256.5	1163.9	1091.0	1025.0	958.9
55°	1911.6	1871.5	1781.7	1705.4	1580.1	1431.0	1313.5	1209.6	1131.7	1067.3	1021.0
57.5°	2716.9	2657.0	2539.0	2393.8	2105.8	1822.9	1596.5	1432.7	1351.9	1322.6	1340.1
60°	3094.1	3083.4	3064.7	2995.8	2848.4	2605.0	2334.0	2040.9	1923.4	1913.3	1948.8
62.5°	3273.1	3266.3	3272.0	3263.5	3217.8	3146.6	3068.7	2942.2	2825.8	2750.7	2591.5
65°	3355.5	3360.1	3392.3	3417.7	3423.3	3442.0	3499.0	3656.5	3771.7	3578.0	3135.9
67.5°	3146.0	3172.6	3246.6	3339.2	3447.6	3552.6	3722.1	4054.1	4290.7	4063.1	3435.2
69°	2604.5	2617.5	2798.2	2972.7	3237.5	3422.8	3668.4	4103.8	4369.8	4112.8	3411.5
70°	2050.5	2062.3	2256.0	2493.2	2941.0	3179.4	3500.7	4019.7	4295.8	4046.8	3289.5
72.5°	925.0	908.1	976.4	1103.5	1590.2	1968.6	2530.5	3256.7	3544.2	3242.0	2461.0
75°	646.0	638.7	646.0	646.6	722.3	931.8	1175.7	1765.3	2183.2	1883.9	1175.7
77.5°	500.3	495.3	490.2	484.5	493.6	552.9	576.6	626.3	813.2	769.1	448.4
80°	395.9	391.3	403.8	399.8	399.8	406.6	402.1	383.4	348.4	323.0	289.1
82.5°	184.1	185.2	185.2	201.0	242.3	282.9	295.9	277.3	246.2	209.5	168.9
85°	17.5	19.8	33.3	51.4	102.2	115.2	115.8	96.0	96.0	75.7	61.0
87.5°	0.0	0.6	0.6	0.6	5.1	14.1	11.9	3.4	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°	260.3	260.3	260.3	260.3	260.3	260.3	260.3	260.3	260.3	260.3	260.3
2.5°	300.4	298.7	292.0	285.2	279.0	272.2	266.0	259.8	253.0	247.9	241.7
5°	351.3	338.8	324.7	311.2	297.6	283.5	268.8	255.8	242.3	229.8	218.0
7.5°	402.6	378.4	359.2	334.9	312.9	290.8	270.5	249.6	230.4	212.3	195.4
10°	446.1	416.8	386.8	355.8	324.1	294.8	266.5	241.7	216.3	194.3	173.4
12.5°	481.7	444.4	407.7	368.8	333.2	295.9	260.9	231.0	201.0	176.2	154.7
15°	513.9	471.0	426.9	381.7	336.6	294.2	255.3	218.0	187.5	159.3	135.0
17.5°	539.9	490.7	441.0	390.2	341.7	292.0	247.9	208.9	173.4	144.0	120.3
20°	562.5	511.1	457.4	400.4	345.0	291.4	241.7	197.7	160.9	129.9	106.7
22.5°	583.4	532.0	474.4	413.4	350.1	290.8	236.1	189.2	150.2	119.2	96.0
25°	607.1	552.9	492.4	426.9	359.2	293.1	232.7	182.4	140.6	109.0	87.5
27.5°	633.6	576.6	513.9	443.9	371.0	297.6	231.5	175.1	132.1	99.4	80.8
30°	670.9	604.8	535.4	460.8	381.7	302.7	230.4	170.5	123.7	92.0	74.0
32.5°	703.6	632.5	559.1	478.3	393.6	307.8	229.8	164.3	115.8	84.7	68.9
35°	738.1	657.9	579.4	495.3	403.8	313.4	229.3	159.8	108.4	77.4	63.8
37.5°	768.0	679.4	595.2	509.9	415.1	318.5	229.8	155.9	101.6	71.2	59.3
40°	793.4	701.4	612.7	523.5	426.9	326.4	230.4	151.9	94.9	65.5	55.3
42.5°	816.0	722.3	631.4	538.7	440.5	335.4	233.8	148.5	89.2	60.4	51.4
45°	833.5	741.5	651.7	560.2	462.5	350.1	240.0	146.3	83.6	55.9	48.0
47.5°	851.6	769.7	686.1	594.1	494.7	373.3	250.7	145.7	79.1	52.5	45.2
50°	876.4	797.9	716.6	628.5	524.1	397.0	263.7	146.3	73.4	49.1	42.4
52.5°	894.5	826.7	756.2	688.4	594.1	469.3	314.0	156.4	70.6	46.3	39.0
55°	1001.2	989.4	991.1	1002.4	929.5	798.5	525.2	225.9	83.0	52.5	38.4
57.5°	1411.8	1453.6	1477.9	1477.3	1357.0	1125.5	705.3	290.3	92.6	61.0	45.7
60°	1951.7	1920.0	1875.4	1765.3	1605.5	1284.7	788.9	312.3	80.2	48.6	41.8
62.5°	2428.8	2243.6	2079.3	1900.8	1691.3	1340.1	805.9	310.6	70.0	36.7	29.4
65°	2726.5	2393.3	2127.9	1904.2	1657.4	1293.8	762.4	285.2	59.3	29.9	24.3
67.5°	2797.6	2312.5	1937.0	1651.8	1384.7	1006.9	559.6	214.6	46.3	24.8	21.5
69°	2642.3	2055.6	1604.9	1281.3	1007.5	668.1	346.2	135.5	35.6	22.6	19.8
70°	2430.5	1787.9	1307.3	1028.3	746.0	469.3	242.3	95.4	28.8	20.9	18.1
72.5°	1563.7	939.1	642.6	447.3	307.8	186.9	94.9	42.9	22.0	17.5	14.7
75°	606.5	347.3	251.9	191.4	149.7	103.9	57.6	27.7	18.6	14.7	11.3
77.5°	298.7	228.7	186.9	128.2	74.5	46.3	31.1	21.5	15.2	10.7	7.3
80°	236.1	157.0	93.7	58.2	44.0	33.3	23.7	17.5	11.3	6.8	5.1
82.5°	120.8	66.1	48.6	39.5	32.8	26.0	19.2	12.4	7.3	4.5	4.0
85°	37.8	27.7	24.8	24.3	22.6	18.6	13.6	7.9	4.5	2.8	2.8
87.5°	2.8	4.0	5.1	4.0	4.5	4.0	5.1	3.4	2.3	2.3	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°	260.3	260.3	260.3	260.3	260.3	260.3	260.3	260.3	260.3	260.3	260.3
2.5°	237.2	230.4	224.2	220.2	212.9	210.1	207.3	206.1	201.0	202.2	197.7
5°	207.3	195.4	186.4	177.3	168.9	162.6	157.6	151.3	146.3	144.0	139.5
7.5°	180.1	164.9	153.0	143.4	133.3	125.4	118.6	114.1	109.6	105.0	102.8
10°	156.4	140.0	126.5	116.9	107.3	100.5	95.4	92.0	89.2	87.5	87.0
12.5°	134.4	118.6	106.2	97.7	90.4	87.0	84.7	83.0	82.4	81.9	81.9
15°	117.5	101.6	92.0	85.8	82.4	80.8	80.2	79.1	77.9	77.4	77.4
17.5°	101.6	89.8	83.0	79.6	77.9	76.8	75.7	74.5	73.4	72.8	72.8
20°	90.9	81.3	77.9	75.7	74.0	72.8	71.2	70.0	69.5	68.9	68.3
22.5°	82.4	76.2	74.0	72.3	70.0	68.3	67.2	66.1	64.9	64.4	63.8
25°	76.2	72.3	70.6	68.3	66.1	64.4	62.7	61.0	59.9	59.3	58.2
27.5°	71.7	68.9	66.6	63.8	61.6	59.9	58.2	56.5	55.3	54.2	53.6
30°	67.8	64.9	62.1	59.9	57.0	55.3	53.1	51.4	50.8	49.7	48.6
32.5°	63.8	61.0	58.2	55.3	52.5	50.3	49.1	46.9	45.7	45.2	44.0
35°	59.3	56.5	53.1	50.8	48.0	45.7	44.0	42.4	41.2	40.1	39.5
37.5°	55.3	52.0	48.6	45.7	43.5	41.2	39.5	37.8	36.7	35.6	35.0
40°	50.8	47.4	44.0	41.2	39.0	37.3	35.6	33.9	32.8	32.2	32.2
42.5°	46.9	42.9	39.5	37.3	35.6	33.3	31.6	29.9	29.4	28.8	29.4
45°	42.9	39.0	36.1	33.9	32.2	29.9	28.2	27.1	26.5	27.1	27.7
47.5°	39.5	35.6	32.8	31.1	29.4	27.7	26.0	24.8	24.8	26.0	27.1
50°	36.1	32.2	29.9	28.8	27.1	25.4	23.2	22.6	23.2	24.3	25.4
52.5°	32.8	28.2	26.5	26.0	24.3	22.6	20.9	20.3	20.9	22.0	21.5
55°	29.4	24.8	24.3	23.7	22.0	19.8	18.1	18.1	18.1	17.5	16.4
57.5°	28.2	22.0	21.5	20.9	19.2	16.9	15.8	14.7	14.1	12.4	11.9
60°	29.4	19.8	19.8	18.6	16.9	14.7	13.0	11.3	10.2	9.0	9.0
62.5°	23.7	18.1	17.5	16.4	14.1	11.9	10.2	8.5	7.9	7.3	7.3
65°	19.2	16.4	15.2	13.6	11.9	9.6	7.9	6.8	6.2	6.2	6.8
67.5°	17.5	14.7	13.0	11.3	9.6	7.3	6.2	5.6	5.6	6.2	6.2
69°	16.4	13.6	11.9	10.2	8.5	6.8	5.6	5.6	5.6	5.6	6.2
70°	15.2	13.0	11.3	9.6	7.3	5.6	5.1	5.1	5.6	5.6	6.2
72.5°	11.9	10.2	9.6	7.9	5.6	5.1	4.5	5.1	5.1	5.6	5.6
75°	9.0	7.3	7.3	6.2	4.5	4.0	4.0	4.5	4.5	5.1	5.1
77.5°	6.2	5.1	5.1	4.5	4.0	3.4	3.4	4.0	4.5	4.5	5.1
80°	4.5	4.0	3.4	4.0	3.4	2.8	3.4	4.0	4.0	4.5	4.5
82.5°	3.4	3.4	3.4	3.4	2.8	2.8	3.4	3.4	4.0	4.5	4.5
85°	2.8	2.8	2.8	2.8	2.8	2.8	2.8	3.4	3.4	4.0	4.0
87.5°	1.7	1.7	1.7	2.3	2.3	2.8	2.8	2.8	2.8	3.4	3.4
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: P151796

CATALOG NUMBER: TLM-F02-LED-E1-SL4-HSS-7050

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	260.3	260.3	260.3	260.3
2.5°	196.5	196.0	193.7	194.3
5°	137.8	134.4	136.7	136.1
7.5°	101.1	100.5	100.0	101.1
10°	86.4	86.4	85.8	86.4
12.5°	81.3	81.3	81.3	81.3
15°	77.4	77.4	76.8	76.8
17.5°	72.8	72.8	72.8	72.3
20°	68.3	67.8	67.8	67.8
22.5°	63.2	62.7	62.7	62.7
25°	58.2	57.6	57.6	57.6
27.5°	53.1	52.5	52.0	52.0
30°	48.0	47.4	46.9	46.9
32.5°	42.9	42.4	41.8	41.8
35°	38.4	38.4	37.8	37.3
37.5°	34.4	34.4	34.4	34.4
40°	31.6	32.2	32.2	32.2
42.5°	29.9	30.5	31.1	31.6
45°	28.8	29.9	30.5	30.5
47.5°	28.2	28.8	29.4	29.4
50°	26.0	25.4	25.4	25.4
52.5°	20.9	19.8	19.2	18.6
55°	15.2	14.7	13.6	13.6
57.5°	10.7	10.7	10.2	10.2
60°	8.5	8.5	7.9	8.5
62.5°	7.3	7.3	7.3	7.3
65°	6.8	6.8	6.8	6.8
67.5°	6.8	6.8	6.8	6.8
69°	6.2	6.2	6.2	6.2
70°	6.2	6.2	6.2	6.2
72.5°	5.6	5.6	5.6	5.6
75°	5.1	5.6	5.6	5.6
77.5°	5.1	5.1	5.1	5.1
80°	4.5	4.5	5.1	5.1
82.5°	4.5	4.5	4.5	4.5
85°	4.0	4.0	4.5	4.5
87.5°	3.4	3.4	4.0	4.0
90°	0.0	0.0	0.0	0.0

(END OF REPORT)