

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: P151808

Luminaire Tested: **TLM-E04-LED-E1-SL4-HSS-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P151808
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-E04-LED-E1-SL4-HSS-8030
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND
HOUSE SIDE SHIELD
Light Source: (84) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

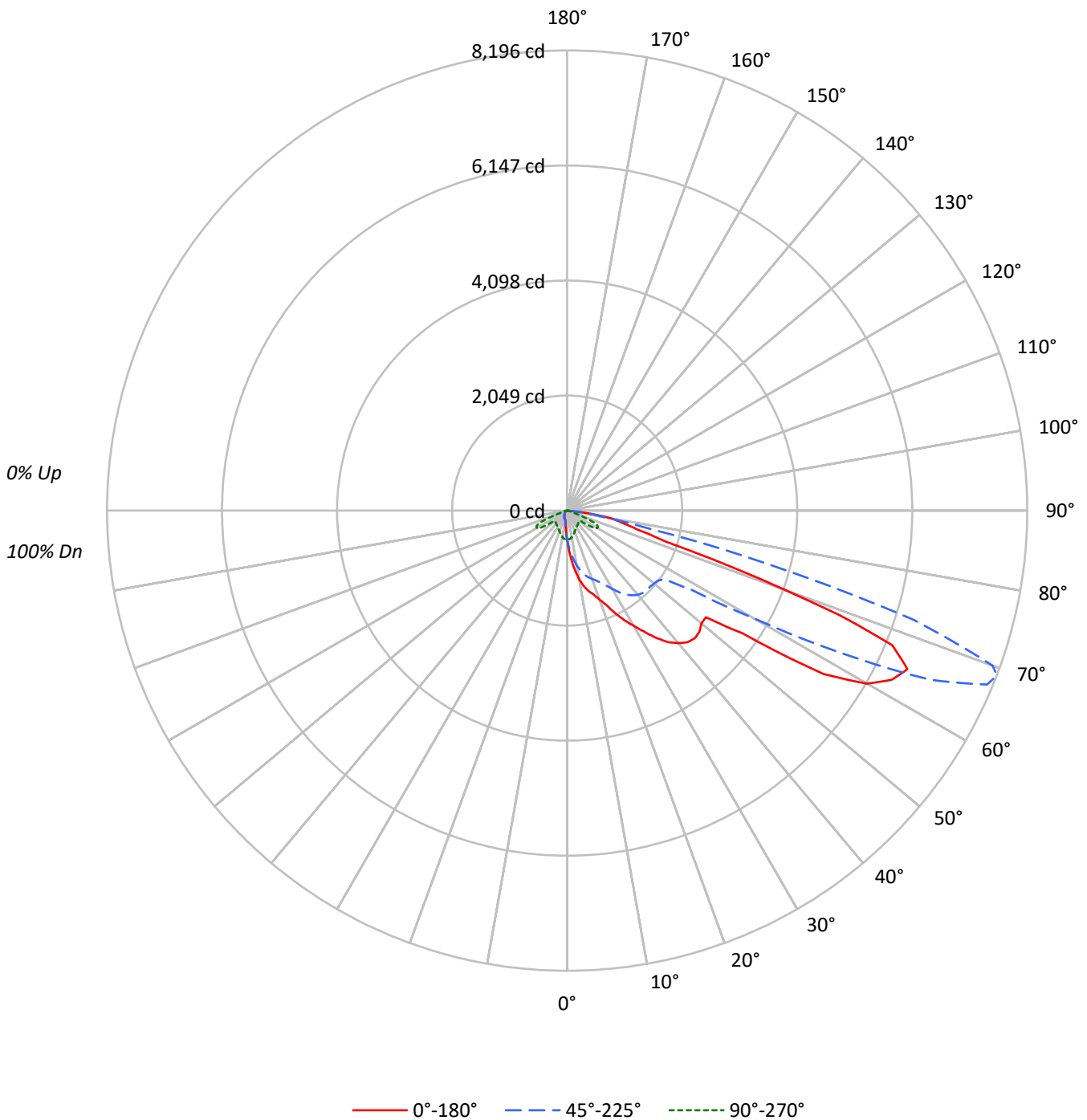
Lumens per Lamp: N/A
Luminaire Lumens: 6869.5 lumens
Efficiency: N/A
Efficacy: 70.7 lumens/watt
Spacing Criteria (0/90/45): 4.24 / 0.98 / 4.1
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 97.2
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°	8335	8335	8335
5°	14247	8222	4374
10°	20286	7857	2809
15°	24669	7225	2545
20°	28782	6734	2308
25°	35626	6444	2035
30°	43964	6304	1733
35°	54336	6247	1457
40°	64642	6348	1344
45°	73072	6623	1381
50°	78077	7286	1265
55°	106693	12607	756
60°	198107	19995	543
65°	254190	21604	513
70°	191930	8934	582
75°	79912	3420	701
80°	72987	3229	934
85°	6433	2912	1659



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.3	0.8
10°-20°	183.8	2.7
20°-30°	351.9	5.1
30°-40°	585.2	8.5
40°-50°	791.8	11.5
50°-60°	1238.3	18.0
60°-70°	2545.9	37.1
70°-80°	1024.4	14.9
80°-90°	94.8	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°	589.0	8.6
0°-40°	1174.2	17.1
0°-60°	3204.3	46.6
0°-90°	6869.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6869.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	519	519	519	519	519	
5°	883	752	510	324	271	95
15°	1483	1176	434	161	153	424
25°	2010	1416	364	128	115	941
35°	2770	1828	318	91	74	1737
45°	3216	2001	292	60	61	2458
55°	3809	2127	450	39	27	3841
65°	6687	7130	568	19	14	6126
75°	1287	3754	55	8	11	1726
85°	35	151	16	6	9	216
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°	518.8	518.8	518.8	518.8	518.8	518.8	518.8	518.8	518.8	518.8	518.8
2.5°	692.1	684.2	675.2	675.2	663.9	663.9	657.2	639.2	636.9	626.8	616.7
5°	883.4	876.6	865.4	855.2	846.2	830.5	819.2	797.9	774.2	751.7	731.5
7.5°	1070.2	1066.8	1046.5	1043.2	1028.5	1002.7	980.2	948.6	908.1	876.6	839.5
10°	1243.5	1235.6	1231.1	1212.0	1190.6	1162.5	1127.6	1089.3	1042.0	992.5	939.6
12.5°	1380.8	1376.3	1356.0	1348.1	1325.6	1297.5	1253.6	1204.1	1156.8	1092.7	1030.8
15°	1483.2	1475.3	1461.8	1449.4	1422.4	1397.6	1357.1	1303.1	1245.7	1176.0	1101.7
17.5°	1568.7	1554.1	1550.7	1531.6	1503.4	1474.2	1429.2	1379.6	1312.1	1242.4	1161.3
20°	1683.5	1663.2	1656.5	1628.3	1595.7	1555.2	1503.4	1441.5	1370.6	1294.1	1210.8
22.5°	1818.5	1803.9	1789.3	1764.5	1722.9	1665.5	1590.1	1522.6	1432.5	1348.1	1258.1
25°	2009.8	1997.4	1973.8	1940.1	1888.3	1819.6	1728.5	1629.5	1523.7	1415.7	1309.9
27.5°	2195.5	2184.2	2167.4	2141.5	2083.0	2007.6	1895.0	1769.0	1635.1	1504.6	1387.5
30°	2369.9	2359.8	2342.9	2317.0	2265.3	2191.0	2063.8	1928.8	1762.3	1610.3	1469.7
32.5°	2557.9	2554.5	2535.3	2498.2	2453.2	2353.0	2214.6	2069.5	1900.7	1725.1	1560.8
35°	2770.5	2744.7	2726.7	2689.5	2613.0	2506.1	2344.0	2185.4	2007.6	1827.5	1644.1
37.5°	2950.6	2925.8	2903.3	2856.1	2762.7	2626.5	2443.1	2268.6	2085.2	1901.8	1715.0
40°	3082.3	3069.9	3042.9	2981.0	2876.3	2714.3	2516.2	2326.0	2141.5	1956.9	1772.4
42.5°	3180.2	3161.0	3130.6	3066.5	2942.7	2758.2	2545.5	2349.7	2167.4	1990.7	1809.5
45°	3216.2	3200.4	3172.3	3102.5	2968.6	2770.5	2544.4	2342.9	2168.5	2000.8	1834.3
47.5°	3194.8	3179.0	3154.3	3089.0	2957.3	2755.9	2524.1	2323.8	2157.2	2004.2	1856.8
50°	3123.9	3114.9	3095.8	3040.6	2922.5	2727.8	2506.1	2313.7	2155.0	2021.1	1888.3
52.5°	3117.1	3111.5	3087.9	3032.7	2912.3	2718.8	2503.8	2319.3	2174.1	2042.5	1910.8
55°	3809.2	3729.3	3550.4	3398.5	3148.6	2851.6	2617.5	2410.4	2255.1	2126.9	2034.6
57.5°	5413.9	5294.6	5059.4	4770.2	4196.3	3632.5	3181.3	2854.9	2694.0	2635.5	2670.4
60°	6165.6	6144.3	6107.1	5969.8	5676.1	5191.1	4651.0	4066.9	3832.8	3812.6	3883.5
62.5°	6522.4	6508.9	6520.1	6503.2	6412.1	6270.3	6115.0	5862.9	5631.1	5481.4	5164.1
65°	6686.7	6695.7	6759.8	6810.4	6821.7	6858.8	6972.5	7286.5	7516.0	7130.0	6248.9
67.5°	6269.2	6322.1	6469.5	6654.0	6870.1	7079.4	7417.0	8078.7	8550.2	8096.7	6845.3
69°	5190.0	5215.9	5576.0	5923.7	6451.5	6820.6	7310.1	8177.7	8707.7	8195.7	6798.1
70°	4086.0	4109.7	4495.7	4968.3	5860.7	6335.6	6975.9	8010.0	8560.3	8064.1	6555.0
72.5°	1843.3	1809.5	1945.7	2198.9	3168.9	3922.9	5042.6	6489.7	7062.5	6460.5	4904.1
75°	1287.4	1272.7	1287.4	1288.5	1439.3	1856.8	2342.9	3517.8	4350.5	3754.1	2342.9
77.5°	997.0	986.9	976.8	965.5	983.5	1101.7	1149.0	1248.0	1620.5	1532.7	893.5
80°	788.9	779.8	804.6	796.7	796.7	810.2	801.2	764.1	694.3	643.7	576.2
82.5°	366.9	369.1	369.1	400.6	482.8	563.8	589.7	552.5	490.6	417.5	336.5
85°	34.9	39.4	66.4	102.4	203.7	229.6	230.7	191.3	191.3	150.8	121.5
87.5°	0.0	1.1	1.1	1.1	10.1	28.1	23.6	6.8	3.4	3.4	5.6
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°	518.8	518.8	518.8	518.8	518.8	518.8	518.8	518.8	518.8	518.8	518.8
2.5°	598.7	595.3	581.8	568.3	555.9	542.4	530.0	517.6	504.1	494.0	481.6
5°	699.9	675.2	647.1	620.1	593.0	564.9	535.7	509.8	482.8	458.0	434.4
7.5°	802.4	754.0	715.7	667.3	623.4	579.5	539.0	497.4	459.1	423.1	389.4
10°	889.0	830.5	770.8	709.0	645.9	587.4	531.2	481.6	431.0	387.1	345.5
12.5°	959.9	885.6	812.5	734.8	663.9	589.7	519.9	460.3	400.6	351.1	308.3
15°	1024.0	938.5	850.7	760.7	670.7	586.3	508.6	434.4	373.6	317.3	269.0
17.5°	1075.8	977.9	878.9	777.6	680.8	581.8	494.0	416.4	345.5	287.0	239.7
20°	1120.8	1018.4	911.5	797.9	687.6	580.7	481.6	393.9	320.7	258.8	212.7
22.5°	1162.5	1060.1	945.3	823.7	697.7	579.5	470.4	377.0	299.3	237.4	191.3
25°	1209.7	1101.7	981.3	850.7	715.7	584.0	463.6	363.5	280.2	217.2	174.4
27.5°	1262.6	1149.0	1024.0	884.5	739.3	593.0	461.4	348.8	263.3	198.1	160.9
30°	1336.9	1205.2	1066.8	918.3	760.7	603.2	459.1	339.8	246.4	183.4	147.4
32.5°	1402.2	1260.4	1114.1	953.1	784.3	613.3	458.0	327.5	230.7	168.8	137.3
35°	1470.8	1311.0	1154.6	986.9	804.6	624.6	456.9	318.5	216.1	154.2	127.2
37.5°	1530.4	1353.8	1186.1	1016.2	827.1	634.7	458.0	310.6	202.6	141.8	118.2
40°	1581.1	1397.6	1221.0	1043.2	850.7	650.4	459.1	302.7	189.1	130.5	110.3
42.5°	1626.1	1439.3	1258.1	1073.6	877.8	668.4	465.9	296.0	177.8	120.4	102.4
45°	1661.0	1477.5	1298.6	1116.3	921.6	697.7	478.3	291.5	166.5	111.4	95.7
47.5°	1697.0	1533.8	1367.3	1183.8	985.8	743.8	499.6	290.3	157.5	104.7	90.0
50°	1746.5	1590.1	1428.0	1252.5	1044.3	791.1	525.5	291.5	146.3	97.9	84.4
52.5°	1782.5	1647.5	1506.8	1371.8	1183.8	935.1	625.7	311.7	140.7	92.3	77.6
55°	1995.2	1971.6	1974.9	1997.4	1852.3	1591.2	1046.5	450.1	165.4	104.7	76.5
57.5°	2813.3	2896.6	2945.0	2943.8	2704.1	2242.8	1405.5	578.4	184.6	121.5	91.2
60°	3889.1	3826.1	3737.2	3517.8	3199.3	2560.1	1572.1	622.3	159.8	96.8	83.3
62.5°	4840.0	4470.9	4143.4	3787.8	3370.3	2670.4	1605.8	618.9	139.5	73.1	58.5
65°	5433.1	4769.1	4240.2	3794.6	3302.8	2578.1	1519.2	568.3	118.2	59.6	48.4
67.5°	5574.8	4608.2	3859.9	3291.6	2759.3	2006.4	1115.2	427.6	92.3	49.5	42.8
69°	5265.4	4096.2	3198.2	2553.4	2007.6	1331.3	689.8	270.1	70.9	45.0	39.4
70°	4843.4	3562.8	2605.1	2049.2	1486.5	935.1	482.8	190.2	57.4	41.6	36.0
72.5°	3116.0	1871.4	1280.6	891.3	613.3	372.5	189.1	85.5	43.9	34.9	29.3
75°	1208.6	692.1	501.9	381.5	298.2	207.1	114.8	55.1	37.1	29.3	22.5
77.5°	595.3	455.8	372.5	255.4	148.5	92.3	61.9	42.8	30.4	21.4	14.6
80°	470.4	312.8	186.8	115.9	87.8	66.4	47.3	34.9	22.5	13.5	10.1
82.5°	240.8	131.7	96.8	78.8	65.3	51.8	38.3	24.8	14.6	9.0	7.9
85°	75.4	55.1	49.5	48.4	45.0	37.1	27.0	15.8	9.0	5.6	5.6
87.5°	5.6	7.9	10.1	7.9	9.0	7.9	10.1	6.8	4.5	4.5	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



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	518.8	518.8	518.8	518.8	518.8	518.8	518.8	518.8	518.8	518.8	518.8
2.5°	472.6	459.1	446.8	438.9	424.2	418.6	413.0	410.7	400.6	402.9	393.9
5°	413.0	389.4	371.4	353.4	336.5	324.1	314.0	301.6	291.5	287.0	278.0
7.5°	359.0	328.6	305.0	285.8	265.6	249.8	236.3	227.3	218.3	209.3	204.8
10°	311.7	279.1	252.1	232.9	213.8	200.3	190.2	183.4	177.8	174.4	173.3
12.5°	267.8	236.3	211.6	194.7	180.1	173.3	168.8	165.4	164.3	163.2	163.2
15°	234.1	202.6	183.4	171.0	164.3	160.9	159.8	157.5	155.3	154.2	154.2
17.5°	202.6	178.9	165.4	158.7	155.3	153.0	150.8	148.5	146.3	145.2	145.2
20°	181.2	162.0	155.3	150.8	147.4	145.2	141.8	139.5	138.4	137.3	136.2
22.5°	164.3	151.9	147.4	144.0	139.5	136.2	133.9	131.7	129.4	128.3	127.2
25°	151.9	144.0	140.7	136.2	131.7	128.3	124.9	121.5	119.3	118.2	115.9
27.5°	142.9	137.3	132.8	127.2	122.7	119.3	115.9	112.5	110.3	108.0	106.9
30°	135.0	129.4	123.8	119.3	113.7	110.3	105.8	102.4	101.3	99.0	96.8
32.5°	127.2	121.5	115.9	110.3	104.7	100.2	97.9	93.4	91.2	90.0	87.8
35°	118.2	112.5	105.8	101.3	95.7	91.2	87.8	84.4	82.1	79.9	78.8
37.5°	110.3	103.5	96.8	91.2	86.6	82.1	78.8	75.4	73.1	70.9	69.8
40°	101.3	94.5	87.8	82.1	77.6	74.3	70.9	67.5	65.3	64.1	64.1
42.5°	93.4	85.5	78.8	74.3	70.9	66.4	63.0	59.6	58.5	57.4	58.5
45°	85.5	77.6	72.0	67.5	64.1	59.6	56.3	54.0	52.9	54.0	55.1
47.5°	78.8	70.9	65.3	61.9	58.5	55.1	51.8	49.5	49.5	51.8	54.0
50°	72.0	64.1	59.6	57.4	54.0	50.6	46.1	45.0	46.1	48.4	50.6
52.5°	65.3	56.3	52.9	51.8	48.4	45.0	41.6	40.5	41.6	43.9	42.8
55°	58.5	49.5	48.4	47.3	43.9	39.4	36.0	36.0	36.0	34.9	32.6
57.5°	56.3	43.9	42.8	41.6	38.3	33.8	31.5	29.3	28.1	24.8	23.6
60°	58.5	39.4	39.4	37.1	33.8	29.3	25.9	22.5	20.3	18.0	18.0
62.5°	47.3	36.0	34.9	32.6	28.1	23.6	20.3	16.9	15.8	14.6	14.6
65°	38.3	32.6	30.4	27.0	23.6	19.1	15.8	13.5	12.4	12.4	13.5
67.5°	34.9	29.3	25.9	22.5	19.1	14.6	12.4	11.3	11.3	12.4	12.4
69°	32.6	27.0	23.6	20.3	16.9	13.5	11.3	11.3	11.3	11.3	12.4
70°	30.4	25.9	22.5	19.1	14.6	11.3	10.1	10.1	11.3	11.3	12.4
72.5°	23.6	20.3	19.1	15.8	11.3	10.1	9.0	10.1	10.1	11.3	11.3
75°	18.0	14.6	14.6	12.4	9.0	7.9	7.9	9.0	9.0	10.1	10.1
77.5°	12.4	10.1	10.1	9.0	7.9	6.8	6.8	7.9	9.0	9.0	10.1
80°	9.0	7.9	6.8	7.9	6.8	5.6	6.8	7.9	7.9	9.0	9.0
82.5°	6.8	6.8	6.8	6.8	5.6	5.6	6.8	6.8	7.9	9.0	9.0
85°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	6.8	6.8	7.9	7.9
87.5°	3.4	3.4	3.4	4.5	4.5	5.6	5.6	5.6	5.6	6.8	6.8
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: P151808

CATALOG NUMBER: TLM-E04-LED-E1-SL4-HSS-8030

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	518.8	518.8	518.8	518.8
2.5°	391.6	390.5	386.0	387.1
5°	274.6	267.8	272.3	271.2
7.5°	201.4	200.3	199.2	201.4
10°	172.2	172.2	171.0	172.2
12.5°	162.0	162.0	162.0	162.0
15°	154.2	154.2	153.0	153.0
17.5°	145.2	145.2	145.2	144.0
20°	136.2	135.0	135.0	135.0
22.5°	126.0	124.9	124.9	124.9
25°	115.9	114.8	114.8	114.8
27.5°	105.8	104.7	103.5	103.5
30°	95.7	94.5	93.4	93.4
32.5°	85.5	84.4	83.3	83.3
35°	76.5	76.5	75.4	74.3
37.5°	68.6	68.6	68.6	68.6
40°	63.0	64.1	64.1	64.1
42.5°	59.6	60.8	61.9	63.0
45°	57.4	59.6	60.8	60.8
47.5°	56.3	57.4	58.5	58.5
50°	51.8	50.6	50.6	50.6
52.5°	41.6	39.4	38.3	37.1
55°	30.4	29.3	27.0	27.0
57.5°	21.4	21.4	20.3	20.3
60°	16.9	16.9	15.8	16.9
62.5°	14.6	14.6	14.6	14.6
65°	13.5	13.5	13.5	13.5
67.5°	13.5	13.5	13.5	13.5
69°	12.4	12.4	12.4	12.4
70°	12.4	12.4	12.4	12.4
72.5°	11.3	11.3	11.3	11.3
75°	10.1	11.3	11.3	11.3
77.5°	10.1	10.1	10.1	10.1
80°	9.0	9.0	10.1	10.1
82.5°	9.0	9.0	9.0	9.0
85°	7.9	7.9	9.0	9.0
87.5°	6.8	6.8	7.9	7.9
90°	0.0	0.0	0.0	0.0

(END OF REPORT)