

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: P151815

Luminaire Tested: **TLM-F04-LED-E1-SL4-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P151815
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-F04-LED-E1-SL4-HSS
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND
HOUSE SIDE SHIELD
Light Source: (28) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6719.1 lumens
Efficiency: N/A
Efficacy: 65.7 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

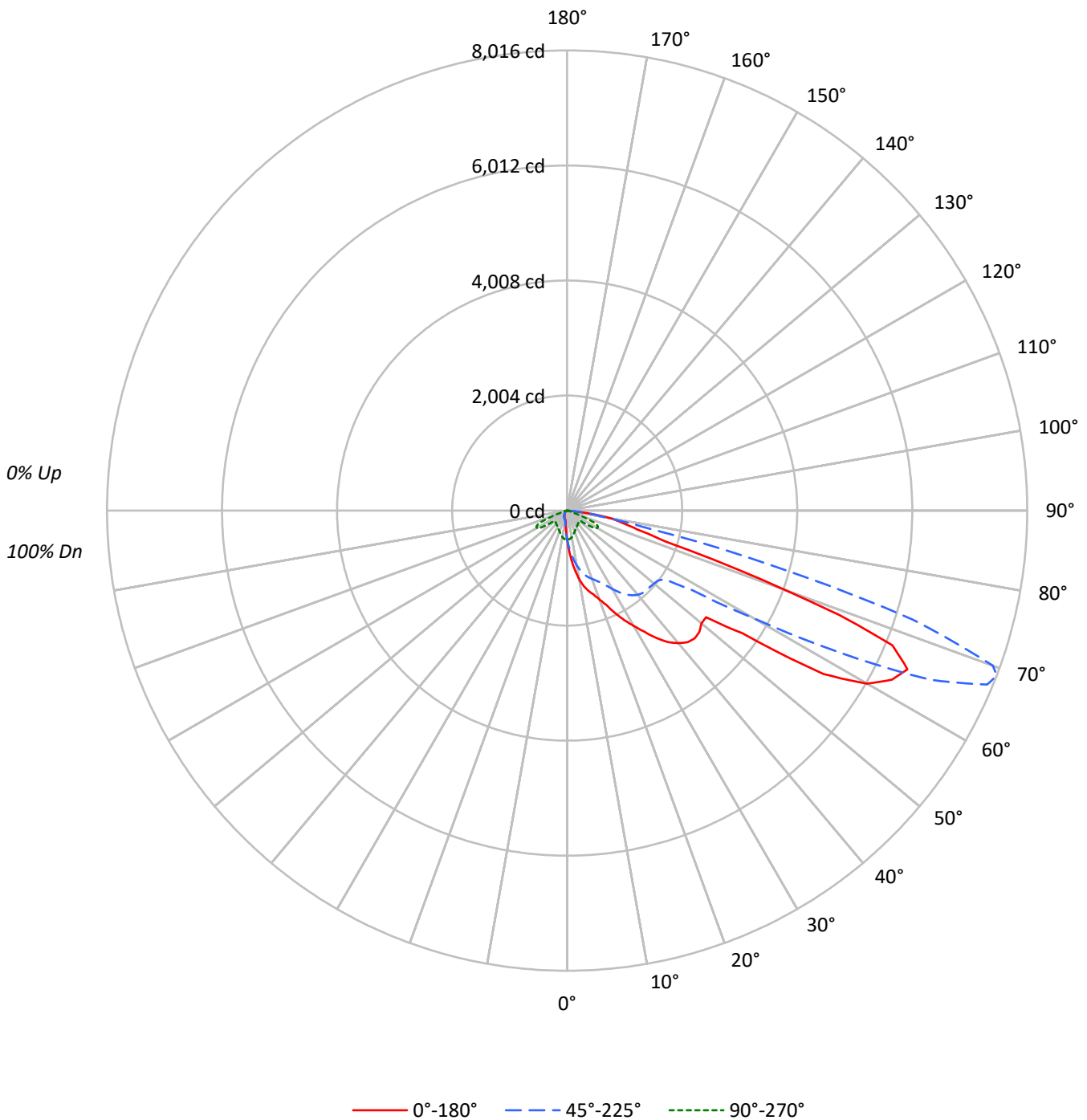
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	8152	8152	8152
5°	13934	8041	4278
10°	19842	7685	2747
15°	24128	7067	2490
20°	28151	6586	2258
25°	34848	6302	1991
30°	43003	6166	1696
35°	53148	6109	1424
40°	63227	6210	1315
45°	71473	6478	1350
50°	76368	7126	1237
55°	104360	12333	739
60°	193773	19558	530
65°	248629	21132	502
70°	187730	8737	568
75°	78162	3346	683
80°	71387	3155	916
85°	6286	2839	1622



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.2	0.8
10°-20°	179.8	2.7
20°-30°	344.2	5.1
30°-40°	572.4	8.5
40°-50°	774.5	11.5
50°-60°	1211.2	18.0
60°-70°	2490.2	37.1
70°-80°	1002.0	14.9
80°-90°	92.7	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°	576.1	8.6
0°-40°	1148.5	17.1
0°-60°	3134.2	46.6
0°-90°	6719.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6719.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	507	507	507	507	507	
5°	864	735	499	317	265	93
15°	1451	1150	425	157	150	415
25°	1966	1385	356	126	112	921
35°	2710	1788	312	89	73	1699
45°	3146	1957	285	58	59	2404
55°	3726	2080	440	38	26	3757
65°	6540	6974	556	19	13	5992
75°	1259	3672	54	8	11	1688
85°	34	148	15	6	9	211
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°	507.4	507.4	507.4	507.4	507.4	507.4	507.4	507.4	507.4	507.4	507.4
2.5°	676.9	669.2	660.4	660.4	649.4	649.4	642.8	625.2	623.0	613.1	603.2
5°	864.0	857.4	846.4	836.5	827.7	812.3	801.3	780.4	757.3	735.3	715.5
7.5°	1046.8	1043.5	1023.7	1020.3	1006.0	980.7	958.7	927.9	888.3	857.4	821.1
10°	1216.3	1208.6	1204.2	1185.5	1164.5	1137.0	1102.9	1065.5	1019.2	970.8	919.1
12.5°	1350.6	1346.2	1326.3	1318.6	1296.6	1269.1	1226.2	1177.7	1131.5	1068.8	1008.2
15°	1450.7	1443.0	1429.8	1417.7	1391.3	1367.1	1327.4	1274.6	1218.5	1150.2	1077.6
17.5°	1534.4	1520.1	1516.8	1498.1	1470.5	1441.9	1397.9	1349.5	1283.4	1215.2	1135.9
20°	1646.6	1626.8	1620.2	1592.7	1560.8	1521.2	1470.5	1410.0	1340.7	1265.8	1184.4
22.5°	1778.7	1764.4	1750.1	1725.9	1685.2	1629.0	1555.3	1489.2	1401.2	1318.6	1230.6
25°	1965.9	1953.7	1930.6	1897.6	1847.0	1779.8	1690.7	1593.8	1490.3	1384.7	1281.2
27.5°	2147.5	2136.5	2119.9	2094.6	2037.4	1963.6	1853.6	1730.3	1599.3	1471.6	1357.2
30°	2318.1	2308.2	2291.7	2266.3	2215.7	2143.1	2018.7	1886.6	1723.7	1575.1	1437.5
32.5°	2501.9	2498.6	2479.9	2443.6	2399.5	2301.6	2166.2	2024.2	1859.1	1687.4	1526.7
35°	2709.9	2684.6	2667.0	2630.7	2555.8	2451.3	2292.8	2137.6	1963.6	1787.5	1608.1
37.5°	2886.0	2861.8	2839.8	2793.6	2702.2	2569.0	2389.6	2219.0	2039.6	1860.2	1677.5
40°	3014.8	3002.7	2976.3	2915.8	2813.4	2654.9	2461.2	2275.1	2094.6	1914.1	1733.6
42.5°	3110.6	3091.9	3062.1	2999.4	2878.3	2697.8	2489.8	2298.3	2119.9	1947.1	1769.9
45°	3145.8	3130.4	3102.9	3034.6	2903.6	2709.9	2488.7	2291.7	2121.0	1957.0	1794.1
47.5°	3124.9	3109.5	3085.3	3021.4	2892.6	2695.6	2468.9	2272.9	2110.0	1960.3	1816.2
50°	3055.5	3046.7	3028.0	2974.1	2858.5	2668.1	2451.3	2263.0	2107.8	1976.9	1847.0
52.5°	3048.9	3043.4	3020.3	2966.4	2848.6	2659.3	2449.1	2268.5	2126.6	1997.8	1869.0
55°	3725.9	3647.7	3472.7	3324.1	3079.8	2789.2	2560.2	2357.7	2205.8	2080.3	1990.1
57.5°	5295.5	5178.8	4948.7	4665.9	4104.5	3553.1	3111.7	2792.5	2635.1	2577.8	2612.0
60°	6030.7	6009.8	5973.5	5839.2	5551.9	5077.5	4549.2	3977.9	3749.0	3729.2	3798.5
62.5°	6379.7	6366.4	6377.5	6360.9	6271.8	6133.1	5981.2	5734.6	5507.9	5361.5	5051.1
65°	6540.4	6549.2	6611.9	6661.4	6672.4	6708.8	6819.9	7127.0	7351.6	6974.0	6112.2
67.5°	6132.0	6183.7	6327.9	6508.4	6719.8	6924.5	7254.7	7901.9	8363.1	7919.5	6695.6
69°	5076.4	5101.7	5454.0	5794.1	6310.3	6671.3	7150.1	7998.8	8517.2	8016.4	6649.3
70°	3996.6	4019.8	4397.3	4859.6	5732.4	6196.9	6823.2	7834.8	8373.0	7887.6	6411.6
72.5°	1802.9	1769.9	1903.1	2150.8	3099.6	3837.0	4932.2	6347.7	6908.0	6319.1	4796.9
75°	1259.2	1244.9	1259.2	1260.3	1407.8	1816.2	2291.7	3440.8	4255.3	3671.9	2291.7
77.5°	975.2	965.3	955.4	944.4	962.0	1077.6	1123.8	1220.7	1585.0	1499.2	874.0
80°	771.6	762.8	787.0	779.3	779.3	792.5	783.7	747.4	679.1	629.6	563.6
82.5°	358.8	361.0	361.0	391.8	472.2	551.5	576.8	540.4	479.9	408.4	329.1
85°	34.1	38.5	64.9	100.2	199.2	224.5	225.6	187.1	187.1	147.5	118.9
87.5°	0.0	1.1	1.1	1.1	9.9	27.5	23.1	6.6	3.3	3.3	5.5
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°	507.4	507.4	507.4	507.4	507.4	507.4	507.4	507.4	507.4	507.4	507.4
2.5°	585.6	582.3	569.1	555.9	543.7	530.5	518.4	506.3	493.1	483.2	471.1
5°	684.6	660.4	632.9	606.5	580.1	552.6	523.9	498.6	472.2	448.0	424.9
7.5°	784.8	737.5	700.0	652.7	609.8	566.9	527.2	486.5	449.1	413.9	380.8
10°	869.6	812.3	754.0	693.4	631.8	574.6	519.5	471.1	421.6	378.6	337.9
12.5°	938.9	866.3	794.7	718.8	649.4	576.8	508.5	450.2	391.8	343.4	301.6
15°	1001.6	918.0	832.1	744.1	656.0	573.5	497.5	424.9	365.4	310.4	263.1
17.5°	1052.3	956.5	859.6	760.6	665.9	569.1	483.2	407.3	337.9	280.7	234.4
20°	1096.3	996.1	891.6	780.4	672.5	568.0	471.1	385.2	313.7	253.2	208.0
22.5°	1137.0	1036.9	924.6	805.7	682.4	566.9	460.1	368.7	292.8	232.2	187.1
25°	1183.3	1077.6	959.8	832.1	700.0	571.3	453.5	355.5	274.1	212.4	170.6
27.5°	1235.0	1123.8	1001.6	865.2	723.2	580.1	451.3	341.2	257.6	193.7	157.4
30°	1307.6	1178.8	1043.5	898.2	744.1	590.0	449.1	332.4	241.1	179.4	144.2
32.5°	1371.5	1232.8	1089.7	932.3	767.2	599.9	448.0	320.3	225.6	165.1	134.3
35°	1438.6	1282.3	1129.3	965.3	787.0	610.9	446.9	311.5	211.3	150.8	124.4
37.5°	1497.0	1324.1	1160.1	993.9	809.0	620.8	448.0	303.8	198.1	138.7	115.6
40°	1546.5	1367.1	1194.3	1020.3	832.1	636.2	449.1	296.1	184.9	127.7	107.9
42.5°	1590.5	1407.8	1230.6	1050.1	858.5	653.8	455.7	289.5	173.9	117.8	100.2
45°	1624.6	1445.2	1270.2	1091.9	901.5	682.4	467.8	285.1	162.9	109.0	93.6
47.5°	1659.9	1500.3	1337.4	1157.9	964.2	727.6	488.7	284.0	154.1	102.4	88.1
50°	1708.3	1555.3	1396.8	1225.1	1021.4	773.8	514.0	285.1	143.1	95.8	82.6
52.5°	1743.5	1611.4	1473.8	1341.8	1157.9	914.7	612.0	304.9	137.6	90.3	75.9
55°	1951.5	1928.4	1931.7	1953.7	1811.8	1556.4	1023.7	440.3	161.8	102.4	74.8
57.5°	2751.7	2833.2	2880.5	2879.4	2645.0	2193.7	1374.8	565.8	180.5	118.9	89.2
60°	3804.0	3742.4	3655.4	3440.8	3129.3	2504.1	1537.7	608.7	156.3	94.7	81.5
62.5°	4734.1	4373.1	4052.8	3705.0	3296.6	2612.0	1570.7	605.4	136.5	71.5	57.2
65°	5314.2	4664.8	4147.4	3711.6	3230.6	2521.7	1485.9	555.9	115.6	58.3	47.3
67.5°	5452.9	4507.4	3775.4	3219.5	2698.9	1962.5	1090.8	418.3	90.3	48.4	41.8
69°	5150.2	4006.5	3128.2	2497.5	1963.6	1302.1	674.7	264.2	69.3	44.0	38.5
70°	4737.4	3484.8	2548.1	2004.4	1454.0	914.7	472.2	186.0	56.1	40.7	35.2
72.5°	3047.8	1830.5	1252.6	871.8	599.9	364.3	184.9	83.7	42.9	34.1	28.6
75°	1182.2	676.9	490.9	373.1	291.7	202.5	112.3	53.9	36.3	28.6	22.0
77.5°	582.3	445.8	364.3	249.9	145.3	90.3	60.5	41.8	29.7	20.9	14.3
80°	460.1	306.0	182.7	113.4	85.9	64.9	46.2	34.1	22.0	13.2	9.9
82.5°	235.5	128.8	94.7	77.0	63.8	50.6	37.4	24.2	14.3	8.8	7.7
85°	73.7	53.9	48.4	47.3	44.0	36.3	26.4	15.4	8.8	5.5	5.5
87.5°	5.5	7.7	9.9	7.7	8.8	7.7	9.9	6.6	4.4	4.4	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



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CANDELA DISTRIBUTION (continued):

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	507.4	507.4	507.4	507.4	507.4	507.4	507.4	507.4	507.4	507.4	507.4
2.5°	462.3	449.1	437.0	429.3	415.0	409.5	404.0	401.8	391.8	394.1	385.2
5°	404.0	380.8	363.2	345.6	329.1	317.0	307.1	295.0	285.1	280.7	271.9
7.5°	351.1	321.4	298.3	279.6	259.8	244.4	231.1	222.3	213.5	204.7	200.3
10°	304.9	273.0	246.6	227.8	209.1	195.9	186.0	179.4	173.9	170.6	169.5
12.5°	262.0	231.1	206.9	190.4	176.1	169.5	165.1	161.8	160.7	159.6	159.6
15°	228.9	198.1	179.4	167.3	160.7	157.4	156.3	154.1	151.9	150.8	150.8
17.5°	198.1	175.0	161.8	155.2	151.9	149.7	147.5	145.3	143.1	142.0	142.0
20°	177.2	158.5	151.9	147.5	144.2	142.0	138.7	136.5	135.4	134.3	133.2
22.5°	160.7	148.6	144.2	140.9	136.5	133.2	131.0	128.8	126.6	125.5	124.4
25°	148.6	140.9	137.6	133.2	128.8	125.5	122.2	118.9	116.7	115.6	113.4
27.5°	139.8	134.3	129.9	124.4	120.0	116.7	113.4	110.1	107.9	105.7	104.6
30°	132.1	126.6	121.1	116.7	111.2	107.9	103.5	100.2	99.1	96.9	94.7
32.5°	124.4	118.9	113.4	107.9	102.4	98.0	95.8	91.4	89.2	88.1	85.9
35°	115.6	110.1	103.5	99.1	93.6	89.2	85.9	82.6	80.4	78.1	77.0
37.5°	107.9	101.3	94.7	89.2	84.8	80.4	77.0	73.7	71.5	69.3	68.2
40°	99.1	92.5	85.9	80.4	75.9	72.6	69.3	66.0	63.8	62.7	62.7
42.5°	91.4	83.7	77.0	72.6	69.3	64.9	61.6	58.3	57.2	56.1	57.2
45°	83.7	75.9	70.4	66.0	62.7	58.3	55.0	52.8	51.7	52.8	53.9
47.5°	77.0	69.3	63.8	60.5	57.2	53.9	50.6	48.4	48.4	50.6	52.8
50°	70.4	62.7	58.3	56.1	52.8	49.5	45.1	44.0	45.1	47.3	49.5
52.5°	63.8	55.0	51.7	50.6	47.3	44.0	40.7	39.6	40.7	42.9	41.8
55°	57.2	48.4	47.3	46.2	42.9	38.5	35.2	35.2	35.2	34.1	31.9
57.5°	55.0	42.9	41.8	40.7	37.4	33.0	30.8	28.6	27.5	24.2	23.1
60°	57.2	38.5	38.5	36.3	33.0	28.6	25.3	22.0	19.8	17.6	17.6
62.5°	46.2	35.2	34.1	31.9	27.5	23.1	19.8	16.5	15.4	14.3	14.3
65°	37.4	31.9	29.7	26.4	23.1	18.7	15.4	13.2	12.1	12.1	13.2
67.5°	34.1	28.6	25.3	22.0	18.7	14.3	12.1	11.0	11.0	12.1	12.1
69°	31.9	26.4	23.1	19.8	16.5	13.2	11.0	11.0	11.0	11.0	12.1
70°	29.7	25.3	22.0	18.7	14.3	11.0	9.9	9.9	11.0	11.0	12.1
72.5°	23.1	19.8	18.7	15.4	11.0	9.9	8.8	9.9	9.9	11.0	11.0
75°	17.6	14.3	14.3	12.1	8.8	7.7	7.7	8.8	8.8	9.9	9.9
77.5°	12.1	9.9	9.9	8.8	7.7	6.6	6.6	7.7	8.8	8.8	9.9
80°	8.8	7.7	6.6	7.7	6.6	5.5	6.6	7.7	7.7	8.8	8.8
82.5°	6.6	6.6	6.6	6.6	5.5	5.5	6.6	6.6	7.7	8.8	8.8
85°	5.5	5.5	5.5	5.5	5.5	5.5	5.5	6.6	6.6	7.7	7.7
87.5°	3.3	3.3	3.3	4.4	4.4	5.5	5.5	5.5	5.5	6.6	6.6
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: P151815

CATALOG NUMBER: TLM-F04-LED-E1-SL4-HSS

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	507.4	507.4	507.4	507.4
2.5°	383.0	381.9	377.5	378.6
5°	268.6	262.0	266.4	265.3
7.5°	197.0	195.9	194.8	197.0
10°	168.4	168.4	167.3	168.4
12.5°	158.5	158.5	158.5	158.5
15°	150.8	150.8	149.7	149.7
17.5°	142.0	142.0	142.0	140.9
20°	133.2	132.1	132.1	132.1
22.5°	123.3	122.2	122.2	122.2
25°	113.4	112.3	112.3	112.3
27.5°	103.5	102.4	101.3	101.3
30°	93.6	92.5	91.4	91.4
32.5°	83.7	82.6	81.5	81.5
35°	74.8	74.8	73.7	72.6
37.5°	67.1	67.1	67.1	67.1
40°	61.6	62.7	62.7	62.7
42.5°	58.3	59.4	60.5	61.6
45°	56.1	58.3	59.4	59.4
47.5°	55.0	56.1	57.2	57.2
50°	50.6	49.5	49.5	49.5
52.5°	40.7	38.5	37.4	36.3
55°	29.7	28.6	26.4	26.4
57.5°	20.9	20.9	19.8	19.8
60°	16.5	16.5	15.4	16.5
62.5°	14.3	14.3	14.3	14.3
65°	13.2	13.2	13.2	13.2
67.5°	13.2	13.2	13.2	13.2
69°	12.1	12.1	12.1	12.1
70°	12.1	12.1	12.1	12.1
72.5°	11.0	11.0	11.0	11.0
75°	9.9	11.0	11.0	11.0
77.5°	9.9	9.9	9.9	9.9
80°	8.8	8.8	9.9	9.9
82.5°	8.8	8.8	8.8	8.8
85°	7.7	7.7	8.8	8.8
87.5°	6.6	6.6	7.7	7.7
90°	0.0	0.0	0.0	0.0

(END OF REPORT)