

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: P150675

Luminaire Tested: **TLM-F04-LED-E1-SL3-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P150675
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)
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-SL3-HSS
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 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: 5725.2 lumens
Efficiency: N/A
Efficacy: 56.0 lumens/watt
Spacing Criteria (0/90/45): 4.23 / 3.52 / 4.34
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
CIE Type: Direct

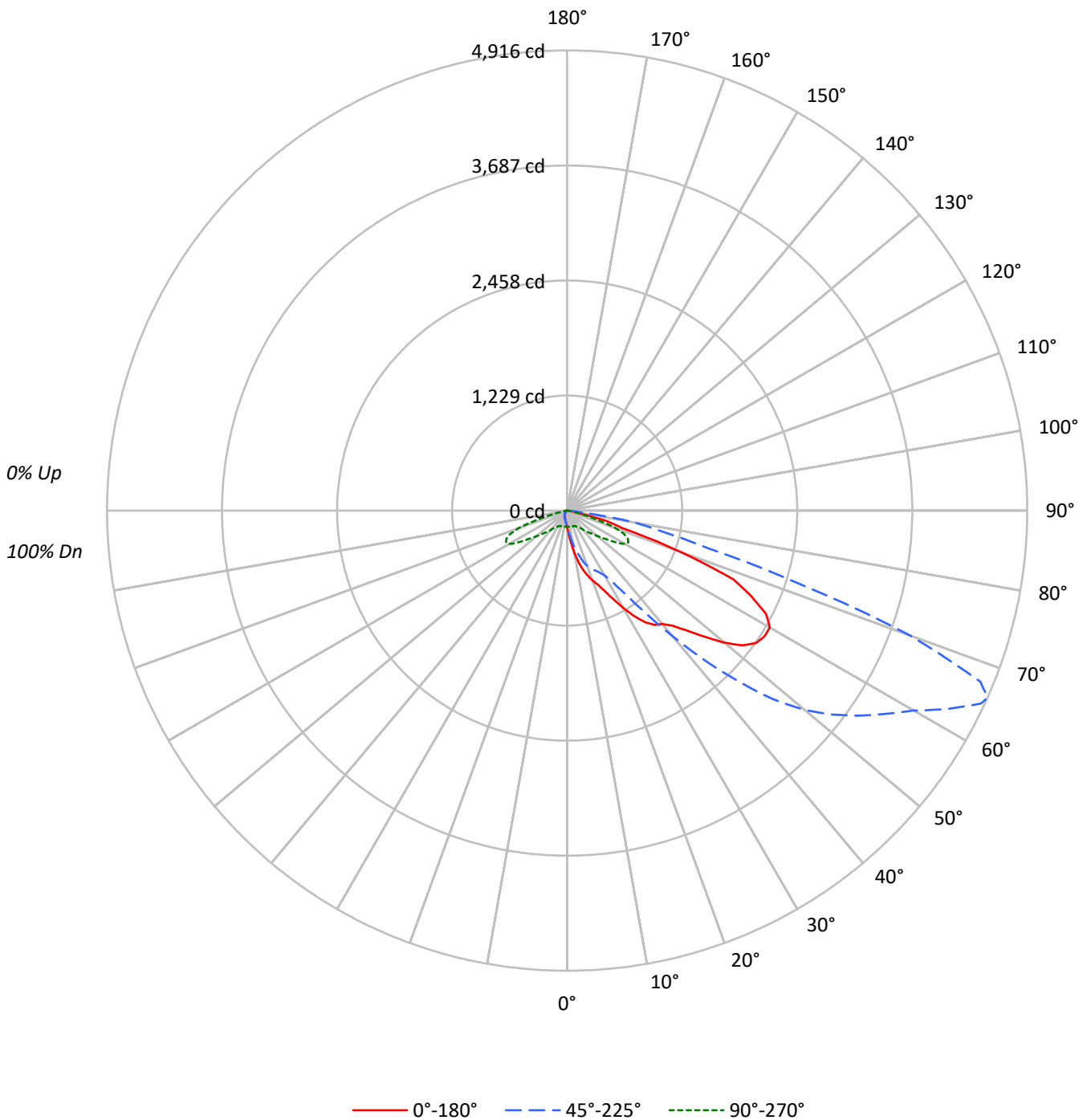
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P150675

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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	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					100			
1	105	98	93	87	102	96	91	86	92	87	83	88	84	81	84	81	78	76					76			
2	91	80	71	63	88	78	69	62	74	67	61	71	64	59	67	62	58	55					55			
3	80	66	55	46	77	64	54	46	61	52	45	58	50	44	55	48	43	40					40			
4	71	55	43	35	68	53	43	34	51	41	34	48	40	33	45	38	32	30					30			
5	63	47	35	27	61	45	34	26	43	33	26	41	32	26	39	31	25	23					23			
6	57	40	29	21	55	39	29	21	37	28	21	35	27	20	33	26	20	17					17			
7	52	35	24	17	50	34	24	17	33	23	17	31	23	16	29	22	16	14					14			
8	48	31	21	14	46	30	21	14	29	20	14	28	19	13	26	19	13	11					11			
9	44	28	18	12	42	27	18	12	26	17	11	25	17	11	24	16	11	9					9			
10	41	25	16	10	39	25	16	10	24	15	10	23	15	10	22	15	10	7					7			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2776	2776	2776
5°	4651	2796	2042
10°	7631	2819	1706
15°	10892	2938	1447
20°	13549	3039	1241
25°	16760	3219	1053
30°	22278	3604	898
35°	28581	4264	755
40°	33148	5610	600
45°	41164	7578	450
50°	54828	10565	440
55°	69060	15446	493
60°	80318	22917	530
65°	82556	27218	585
70°	60336	26136	672
75°	27194	11375	888
80°	4885	2850	1323
85°	406	2535	2433



TEST NUMBER: P150675

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.3	0.3
10°-20°	82.0	1.4
20°-30°	176.9	3.1
30°-40°	377.8	6.6
40°-50°	835.5	14.6
50°-60°	1416.0	24.7
60°-70°	1889.5	33.0
70°-80°	832.3	14.5
80°-90°	95.9	1.7
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°	278.3	4.9
0°-40°	656.1	11.5
0°-60°	2907.6	50.8
0°-90°	5725.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5725.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	173	173	173	173	173	
5°	288	244	173	131	127	33
15°	655	500	177	94	87	187
25°	946	706	182	68	59	453
35°	1457	1092	217	46	38	904
45°	1812	2570	334	28	20	1432
55°	2466	3819	551	13	18	2173
65°	2172	4876	716	10	15	2073
75°	438	1561	183	8	14	483
85°	2	33	14	7	13	13
90°	0	0	0	0	0	



TEST NUMBER: P150675

CATALOG NUMBER: TLM-F04-LED-E1-SL3-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8
2.5°	217.9	216.8	212.4	212.4	205.8	201.4	195.9	190.4	190.4	189.3	188.2
5°	288.4	281.8	280.7	268.6	258.7	244.4	231.1	213.5	211.3	209.1	208.0
7.5°	366.5	365.4	355.5	341.2	321.4	295.0	268.6	240.0	235.5	233.3	228.9
10°	467.8	462.3	449.1	424.9	395.2	359.9	317.0	271.9	266.4	262.0	259.8
12.5°	564.7	554.8	547.0	516.2	478.8	427.1	375.3	310.4	306.0	300.5	291.7
15°	654.9	646.1	632.9	606.5	564.7	499.7	439.2	359.9	348.9	341.2	334.6
17.5°	725.4	719.9	704.4	674.7	629.6	572.4	499.7	410.6	401.8	391.8	379.7
20°	792.5	784.8	760.6	719.9	671.4	627.4	571.3	476.6	464.5	452.4	439.2
22.5°	856.3	848.6	809.0	741.9	690.1	671.4	651.6	551.5	532.7	522.8	509.6
25°	945.5	929.0	867.4	760.6	691.2	705.5	739.7	648.3	630.7	616.4	595.5
27.5°	1065.5	1043.5	946.6	788.1	695.6	743.0	840.9	766.1	747.4	730.9	707.8
30°	1200.9	1186.6	1071.0	854.1	727.6	798.0	954.3	915.8	893.8	874.0	846.4
32.5°	1337.4	1317.5	1203.1	979.6	813.4	904.8	1096.3	1089.7	1061.1	1042.4	1012.6
35°	1457.3	1447.4	1362.7	1185.5	1009.3	1091.9	1285.6	1293.3	1268.0	1248.2	1215.2
37.5°	1538.8	1538.8	1522.3	1406.7	1320.8	1382.5	1564.1	1565.2	1539.9	1494.8	1478.2
40°	1580.6	1592.7	1652.2	1674.2	1669.8	1749.0	1929.5	1909.7	1888.8	1865.7	1810.7
42.5°	1666.5	1677.5	1804.0	1955.9	2055.0	2159.6	2284.0	2277.3	2252.0	2210.2	2159.6
45°	1811.8	1826.1	1976.9	2217.9	2421.5	2570.1	2649.4	2618.6	2593.2	2553.6	2527.2
47.5°	1996.7	2024.2	2194.8	2493.1	2738.5	2984.0	3066.5	2985.1	2963.1	2932.3	2889.3
50°	2193.7	2220.1	2401.7	2742.9	3020.3	3313.1	3450.7	3313.1	3281.2	3271.3	3222.8
52.5°	2364.3	2386.3	2561.3	2935.6	3236.1	3579.5	3779.8	3598.2	3575.1	3542.1	3506.8
55°	2465.6	2483.2	2647.2	3028.0	3382.5	3819.4	4097.9	3938.3	3904.2	3891.0	3840.3
57.5°	2499.7	2517.3	2664.8	3040.1	3461.7	4038.5	4484.3	4489.8	4449.0	4401.7	4386.3
60°	2499.7	2519.5	2643.9	3010.4	3538.8	4271.8	4999.4	5458.4	5370.3	5361.5	5305.4
62.5°	2396.2	2414.9	2540.4	2919.1	3642.2	4586.6	5717.0	6527.2	6501.8	6444.6	6352.1
65°	2171.7	2182.7	2306.0	2685.7	3602.6	4876.1	6338.9	7238.2	7197.5	7085.2	6966.3
66°	2070.4	2079.2	2194.8	2552.5	3472.7	4915.7	6449.0	7327.4	7260.2	7165.6	7031.3
67.5°	1924.0	1939.4	2020.9	2304.9	3161.2	4778.1	6379.7	7264.6	7206.3	7091.8	6957.5
70°	1284.5	1273.5	1560.8	1768.8	2408.3	3893.2	5723.6	6522.7	6523.8	6469.9	6416.0
72.5°	609.8	616.4	700.0	1088.6	1576.2	2601.0	4555.8	5206.3	5281.2	5184.3	5117.2
75°	438.1	448.0	498.6	665.9	940.0	1560.8	2953.2	3641.1	3643.3	3471.6	3318.6
77.5°	127.7	133.2	187.1	410.6	704.4	1053.4	1696.2	2024.2	1976.9	1853.6	1738.0
80°	52.8	52.8	55.0	131.0	282.9	715.5	1186.6	1558.6	1553.1	1505.8	1437.5
82.5°	19.8	20.9	26.4	53.9	67.1	176.1	791.4	1352.8	1349.5	1282.3	1233.9
85°	2.2	2.2	6.6	23.1	25.3	33.0	158.5	596.6	593.3	596.6	522.8
87.5°	0.0	0.0	1.1	2.2	3.3	4.4	6.6	23.1	25.3	24.2	22.0
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: P150675

CATALOG NUMBER: TLM-F04-LED-E1-SL3-HSS

CANDELA DISTRIBUTION (continued):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8
2.5°	188.2	186.0	186.0	184.9	184.9	184.9	183.8	182.7	182.7	181.6	180.5
5°	205.8	203.6	202.5	200.3	199.2	198.1	195.9	194.8	192.6	191.5	190.4
7.5°	226.7	222.3	221.2	217.9	214.6	212.4	210.2	206.9	204.7	200.3	199.2
10°	253.2	247.7	243.3	238.9	235.5	230.0	226.7	222.3	217.9	214.6	211.3
12.5°	287.3	279.6	273.0	268.6	260.9	254.3	247.7	244.4	235.5	231.1	225.6
15°	324.7	315.9	308.2	299.4	293.9	282.9	274.1	264.2	259.8	252.1	243.3
17.5°	373.1	358.8	346.7	337.9	326.9	315.9	306.0	296.1	282.9	274.1	263.1
20°	424.9	412.8	396.3	380.8	367.6	354.4	340.1	326.9	314.8	300.5	287.3
22.5°	490.9	473.3	453.5	438.1	420.5	406.2	386.3	368.7	348.9	330.2	314.8
25°	574.6	551.5	532.7	510.7	489.8	467.8	443.6	421.6	396.3	378.6	352.2
27.5°	678.0	656.0	630.7	602.1	581.2	548.1	516.2	488.7	459.0	431.5	401.8
30°	810.1	778.2	751.8	724.3	682.4	650.5	613.1	575.7	534.9	507.4	462.3
32.5°	968.6	934.5	894.9	855.2	816.7	771.6	725.4	679.1	634.0	583.4	537.1
35°	1162.3	1121.6	1076.5	1033.6	974.1	925.7	867.4	803.5	752.9	694.5	636.2
37.5°	1418.8	1351.7	1312.0	1266.9	1186.6	1120.5	1055.6	991.7	902.6	840.9	758.4
40°	1740.2	1700.6	1635.6	1563.0	1490.3	1403.4	1315.3	1230.6	1127.1	1041.3	945.5
42.5°	2117.7	2059.4	1993.4	1888.8	1815.1	1712.7	1612.5	1500.3	1373.7	1263.6	1151.3
45°	2472.2	2402.8	2352.2	2247.6	2170.6	2049.5	1928.4	1809.6	1663.2	1521.2	1391.3
47.5°	2855.2	2798.0	2714.3	2629.6	2551.4	2414.9	2284.0	2139.8	1985.7	1817.3	1648.8
50°	3192.0	3146.9	3089.7	2987.3	2900.3	2785.9	2631.8	2474.4	2279.5	2112.2	1920.7
52.5°	3478.2	3443.0	3362.6	3290.0	3211.8	3104.0	2966.4	2815.6	2605.4	2421.5	2203.6
55°	3816.1	3790.8	3720.4	3675.2	3605.9	3502.4	3373.6	3233.9	3011.5	2811.2	2564.6
57.5°	4369.8	4350.0	4288.3	4269.6	4201.4	4111.1	3952.6	3802.9	3543.2	3294.4	3012.6
60°	5286.7	5247.0	5156.8	5110.5	4966.4	4845.3	4639.5	4433.6	4119.9	3802.9	3463.9
62.5°	6268.5	6157.3	5985.6	5838.1	5633.4	5423.1	5148.0	4833.2	4465.5	4089.1	3699.5
65°	6797.9	6608.6	6391.8	6157.3	5892.0	5582.7	5236.0	4858.5	4463.3	4066.0	3654.3
66°	6858.5	6644.9	6414.9	6154.0	5859.0	5529.9	5177.7	4781.4	4370.9	3983.4	3571.8
67.5°	6782.5	6559.1	6315.8	6026.3	5707.1	5365.9	4996.1	4584.4	4189.3	3796.3	3395.7
70°	6250.9	6028.5	5811.7	5506.8	5166.7	4823.3	4473.2	4013.2	3638.9	3277.9	2921.3
72.5°	4991.7	4840.9	4626.2	4365.4	4034.1	3631.2	3339.5	2927.9	2603.2	2253.1	1976.9
75°	3119.4	2906.9	2641.7	2309.3	2056.1	1729.2	1558.6	1246.0	1061.1	899.3	743.0
77.5°	1594.9	1435.3	1249.3	1062.2	882.8	704.4	544.8	385.2	259.8	180.5	134.3
80°	1317.5	1176.6	1022.6	851.9	693.4	538.2	387.4	264.2	168.4	110.1	85.9
82.5°	1088.6	969.7	832.1	673.6	536.0	422.7	293.9	191.5	118.9	77.0	60.5
85°	463.4	420.5	324.7	257.6	193.7	143.1	100.2	67.1	47.3	38.5	35.2
87.5°	19.8	22.0	20.9	16.5	12.1	12.1	11.0	8.8	8.8	8.8	8.8
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: P150675

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CANDELA DISTRIBUTION (continued):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8	172.8
2.5°	180.5	179.4	178.3	178.3	177.2	176.1	169.5	164.0	157.4	153.0	148.6
5°	188.2	187.1	184.9	183.8	181.6	180.5	166.2	154.1	144.2	136.5	131.0
7.5°	195.9	194.8	191.5	188.2	187.1	184.9	161.8	146.4	133.2	124.4	118.9
10°	205.8	202.5	199.2	194.8	191.5	188.2	157.4	137.6	123.3	115.6	110.1
12.5°	220.1	214.6	209.1	203.6	199.2	193.7	155.2	129.9	115.6	106.8	101.3
15°	236.7	228.9	222.3	215.7	208.0	202.5	150.8	123.3	109.0	100.2	93.6
17.5°	252.1	243.3	233.3	223.4	215.7	208.0	146.4	116.7	102.4	93.6	87.0
20°	274.1	260.9	248.8	236.7	225.6	215.7	139.8	110.1	96.9	87.0	80.4
22.5°	298.3	282.9	267.5	251.0	236.7	223.4	134.3	104.6	91.4	81.5	73.7
25°	329.1	310.4	289.5	268.6	252.1	234.4	128.8	99.1	85.9	75.9	68.2
27.5°	372.0	345.6	322.5	296.1	270.8	251.0	124.4	94.7	80.4	70.4	62.7
30°	430.4	391.8	355.5	326.9	297.2	268.6	120.0	89.2	75.9	64.9	56.1
32.5°	495.3	450.2	408.4	365.4	328.0	295.0	115.6	84.8	70.4	59.4	51.7
35°	575.7	518.4	462.3	412.8	367.6	323.6	111.2	80.4	66.0	53.9	46.2
37.5°	691.2	619.7	545.9	482.1	423.8	365.4	107.9	75.9	60.5	48.4	40.7
40°	849.7	757.3	667.0	580.1	504.1	431.5	103.5	71.5	56.1	44.0	36.3
42.5°	1021.4	909.2	790.3	692.3	587.8	496.4	99.1	67.1	51.7	39.6	31.9
45°	1235.0	1095.2	951.0	817.8	690.1	572.4	94.7	62.7	46.2	35.2	27.5
47.5°	1468.3	1290.0	1127.1	959.8	807.9	667.0	89.2	59.4	41.8	30.8	24.2
50°	1708.3	1520.1	1314.2	1123.8	943.3	761.7	83.7	53.9	37.4	27.5	19.8
52.5°	1967.0	1744.6	1534.4	1297.7	1087.5	886.1	78.1	49.5	34.1	24.2	16.5
55°	2296.1	2047.3	1800.7	1535.5	1282.3	1030.3	72.6	44.0	29.7	20.9	13.2
57.5°	2709.9	2414.9	2112.2	1812.9	1505.8	1219.6	68.2	38.5	25.3	17.6	11.0
60°	3100.7	2756.2	2389.6	2045.1	1698.4	1364.9	61.6	34.1	22.0	14.3	11.0
62.5°	3303.2	2910.3	2515.1	2135.4	1765.5	1416.6	55.0	28.6	18.7	12.1	9.9
65°	3253.7	2853.0	2470.0	2086.9	1724.8	1383.6	48.4	25.3	16.5	11.0	9.9
66°	3182.1	2785.9	2400.6	2036.3	1690.7	1348.4	45.1	24.2	15.4	11.0	8.8
67.5°	3025.8	2642.8	2275.1	1936.1	1597.1	1281.2	40.7	22.0	14.3	9.9	8.8
70°	2584.4	2236.6	1942.7	1641.1	1364.9	1079.8	33.0	18.7	12.1	8.8	8.8
72.5°	1710.5	1473.8	1277.9	1099.6	919.1	713.3	27.5	15.4	9.9	8.8	7.7
75°	645.0	583.4	500.8	450.2	392.9	344.5	22.0	9.9	7.7	7.7	7.7
77.5°	114.5	105.7	93.6	85.9	79.3	72.6	17.6	6.6	6.6	7.7	7.7
80°	77.0	71.5	64.9	59.4	55.0	49.5	12.1	5.5	6.6	6.6	7.7
82.5°	55.0	51.7	48.4	44.0	40.7	36.3	7.7	5.5	6.6	6.6	6.6
85°	33.0	30.8	28.6	26.4	23.1	22.0	5.5	5.5	5.5	6.6	6.6
87.5°	8.8	7.7	8.8	8.8	6.6	7.7	4.4	4.4	4.4	5.5	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



TEST NUMBER: P150675

CATALOG NUMBER: TLM-F04-LED-E1-SL3-HSS

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	172.8	172.8	172.8	172.8	172.8
2.5°	146.4	146.4	144.2	147.5	147.5
5°	126.6	126.6	125.5	126.6	126.6
7.5°	115.6	114.5	114.5	114.5	115.6
10°	105.7	104.6	104.6	104.6	104.6
12.5°	96.9	95.8	94.7	95.8	95.8
15°	89.2	87.0	87.0	87.0	87.0
17.5°	82.6	80.4	79.3	79.3	79.3
20°	75.9	72.6	72.6	72.6	72.6
22.5°	69.3	66.0	66.0	66.0	66.0
25°	62.7	59.4	59.4	59.4	59.4
27.5°	57.2	53.9	53.9	53.9	53.9
30°	50.6	48.4	48.4	49.5	48.4
32.5°	46.2	42.9	42.9	44.0	44.0
35°	40.7	38.5	38.5	38.5	38.5
37.5°	35.2	33.0	33.0	33.0	33.0
40°	30.8	28.6	27.5	28.6	28.6
42.5°	26.4	24.2	23.1	23.1	23.1
45°	23.1	19.8	18.7	19.8	19.8
47.5°	18.7	16.5	16.5	17.6	17.6
50°	14.3	14.3	15.4	17.6	17.6
52.5°	13.2	13.2	15.4	17.6	17.6
55°	12.1	13.2	15.4	16.5	17.6
57.5°	11.0	13.2	15.4	16.5	16.5
60°	11.0	12.1	14.3	16.5	16.5
62.5°	9.9	11.0	13.2	15.4	15.4
65°	9.9	11.0	13.2	15.4	15.4
66°	9.9	11.0	13.2	15.4	15.4
67.5°	9.9	11.0	13.2	15.4	15.4
70°	9.9	11.0	13.2	14.3	14.3
72.5°	8.8	9.9	12.1	14.3	14.3
75°	8.8	9.9	12.1	14.3	14.3
77.5°	8.8	9.9	12.1	14.3	14.3
80°	8.8	9.9	12.1	13.2	14.3
82.5°	7.7	9.9	11.0	13.2	13.2
85°	7.7	8.8	11.0	12.1	13.2
87.5°	6.6	7.7	8.8	11.0	11.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)