

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: P150676

Luminaire Tested: **TLM-F04-LED-E1-SL3-HSS-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P150676
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-7050
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND
HOUSE SIDE SHIELD
Light Source: (28) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5874.7 lumens
Efficiency: N/A
Efficacy: 57.5 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

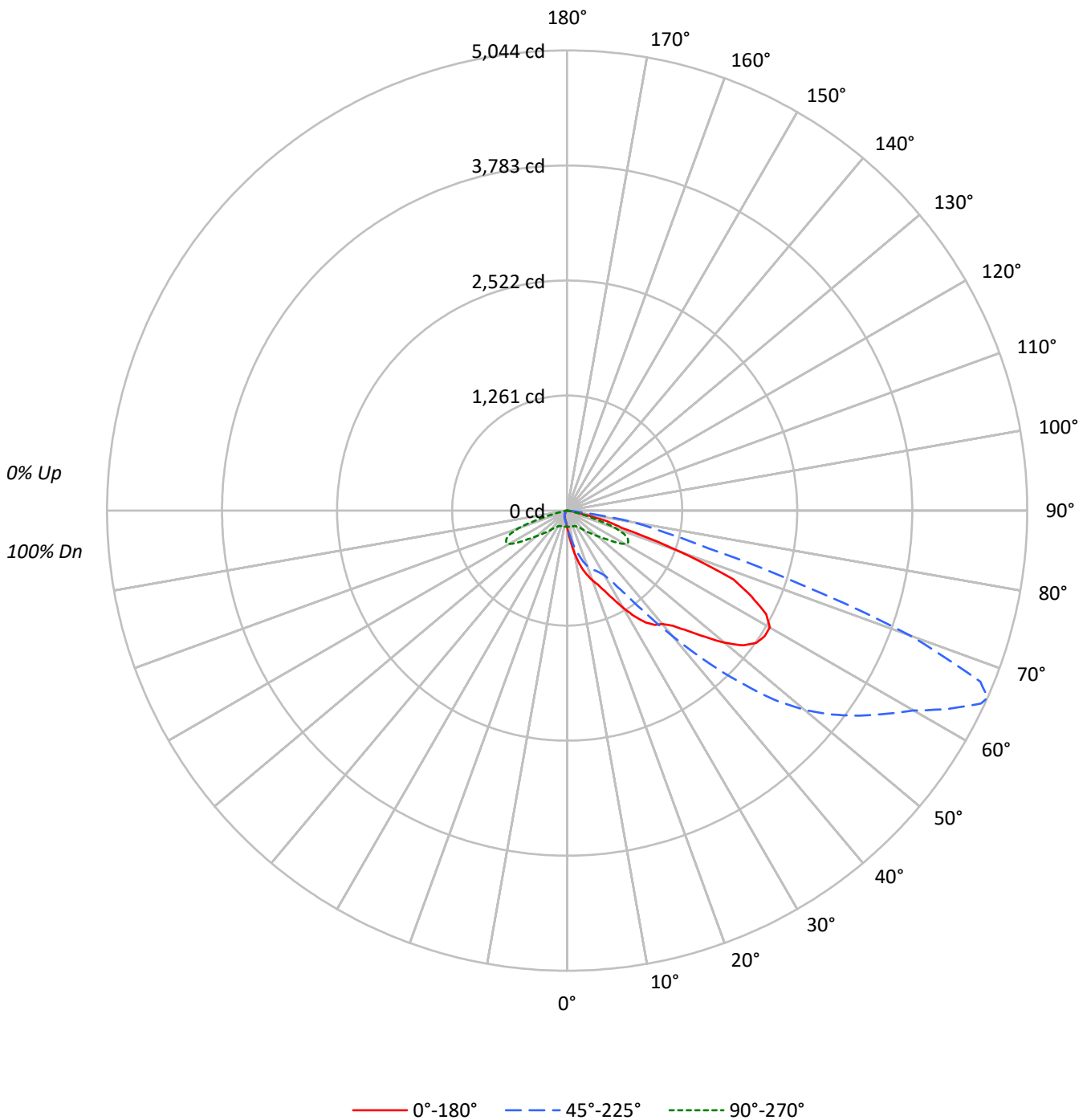
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2848	2848	2848
5°	4772	2868	2095
10°	7830	2892	1750
15°	11177	3015	1484
20°	13903	3118	1274
25°	17198	3303	1081
30°	22858	3698	922
35°	29328	4376	775
40°	34015	5756	617
45°	42237	7775	461
50°	56260	10840	452
55°	70861	15849	507
60°	82413	23515	543
65°	84711	27929	601
70°	61910	26819	690
75°	27902	11673	912
80°	5014	2924	1360
85°	424	2599	2507



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.9	0.3
10°-20°	84.2	1.4
20°-30°	181.5	3.1
30°-40°	387.7	6.6
40°-50°	857.3	14.6
50°-60°	1452.9	24.7
60°-70°	1938.8	33.0
70°-80°	854.0	14.5
80°-90°	98.4	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°	285.5	4.9
0°-40°	673.2	11.5
0°-60°	2983.5	50.8
0°-90°	5874.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5874.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	177	177	177	177	177	
5°	296	251	178	134	130	34
15°	672	513	181	96	89	192
25°	970	724	186	70	61	465
35°	1495	1120	223	47	40	927
45°	1859	2637	342	28	20	1469
55°	2530	3919	566	14	18	2230
65°	2228	5003	735	10	16	2127
75°	450	1602	188	8	15	496
85°	2	34	14	7	14	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3
2.5°	223.6	222.5	218.0	218.0	211.2	206.7	201.0	195.4	195.4	194.3	193.1
5°	295.9	289.1	288.0	275.6	265.4	250.7	237.2	219.1	216.9	214.6	213.5
7.5°	376.1	375.0	364.8	350.1	329.8	302.7	275.6	246.2	241.7	239.4	234.9
10°	480.0	474.4	460.8	436.0	405.5	369.3	325.3	279.0	273.3	268.8	266.5
12.5°	579.4	569.2	561.3	529.7	491.3	438.2	385.1	318.5	314.0	308.3	299.3
15°	672.0	663.0	649.4	622.3	579.4	512.8	450.6	369.3	358.0	350.1	343.3
17.5°	744.3	738.6	722.8	692.3	646.0	587.3	512.8	421.3	412.2	402.1	389.7
20°	813.2	805.3	780.4	738.6	689.0	643.8	586.2	489.0	476.6	464.2	450.6
22.5°	878.7	870.8	830.1	761.2	708.2	689.0	668.6	565.8	546.6	536.5	522.9
25°	970.2	953.2	890.0	780.4	709.3	724.0	759.0	665.2	647.2	632.5	611.0
27.5°	1093.3	1070.7	971.3	808.7	713.8	762.4	862.9	786.1	766.9	749.9	726.2
30°	1232.2	1217.5	1098.9	876.4	746.6	818.8	979.2	939.7	917.1	896.8	868.5
32.5°	1372.3	1351.9	1234.5	1005.2	834.7	928.4	1124.9	1118.1	1088.8	1069.6	1039.1
35°	1495.4	1485.2	1398.2	1216.4	1035.7	1120.4	1319.2	1327.1	1301.1	1280.8	1246.9
37.5°	1578.9	1578.9	1562.0	1443.4	1355.3	1418.6	1604.9	1606.1	1580.1	1533.8	1516.8
40°	1621.9	1634.3	1695.3	1717.9	1713.4	1794.7	1979.9	1959.6	1938.1	1914.4	1857.9
42.5°	1710.0	1721.3	1851.1	2007.0	2108.7	2215.9	2343.6	2336.8	2310.8	2267.9	2215.9
45°	1859.0	1873.7	2028.5	2275.8	2484.8	2637.2	2718.5	2686.9	2660.9	2620.3	2593.2
47.5°	2048.8	2077.0	2252.1	2558.2	2810.0	3061.9	3146.6	3063.0	3040.4	3008.8	2964.8
50°	2251.0	2278.1	2464.4	2814.5	3099.2	3399.6	3540.8	3399.6	3366.8	3356.7	3307.0
52.5°	2426.0	2448.6	2628.2	3012.2	3320.5	3672.9	3878.5	3692.1	3668.4	3634.5	3598.4
55°	2529.9	2548.0	2716.3	3107.1	3470.8	3919.1	4204.9	4041.1	4006.1	3992.5	3940.6
57.5°	2564.9	2583.0	2734.4	3119.5	3552.1	4143.9	4601.3	4607.0	4565.2	4516.6	4500.8
60°	2564.9	2585.3	2712.9	3089.0	3631.1	4383.3	5129.9	5600.9	5510.5	5501.5	5443.9
62.5°	2458.8	2478.0	2606.7	2995.3	3737.3	4706.4	5866.3	6697.5	6671.6	6612.8	6518.0
65°	2228.4	2239.7	2366.2	2755.8	3696.6	5003.4	6504.4	7427.2	7385.4	7270.2	7148.2
66°	2124.5	2133.5	2252.1	2619.2	3563.4	5044.1	6617.4	7518.6	7449.7	7352.6	7214.8
67.5°	1974.3	1990.1	2073.6	2365.0	3243.7	4902.9	6546.2	7454.3	7394.4	7276.9	7139.2
70°	1318.0	1306.8	1601.5	1815.0	2471.2	3994.8	5873.1	6693.0	6694.2	6638.8	6583.5
72.5°	625.7	632.5	718.3	1117.0	1617.3	2668.9	4674.7	5342.2	5419.0	5319.6	5250.7
75°	449.5	459.7	511.6	683.3	964.5	1601.5	3030.3	3736.2	3738.4	3562.2	3405.2
77.5°	131.0	136.7	192.0	421.3	722.8	1080.9	1740.5	2077.0	2028.5	1902.0	1783.4
80°	54.2	54.2	56.5	134.4	290.3	734.1	1217.5	1599.3	1593.6	1545.1	1475.0
82.5°	20.3	21.5	27.1	55.3	68.9	180.7	812.1	1388.1	1384.7	1315.8	1266.1
85°	2.3	2.3	6.8	23.7	26.0	33.9	162.6	612.2	608.8	612.2	536.5
87.5°	0.0	0.0	1.1	2.3	3.4	4.5	6.8	23.7	26.0	24.8	22.6
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3
2.5°	193.1	190.9	190.9	189.7	189.7	189.7	188.6	187.5	187.5	186.4	185.2
5°	211.2	208.9	207.8	205.6	204.4	203.3	201.0	199.9	197.7	196.5	195.4
7.5°	232.7	228.1	227.0	223.6	220.2	218.0	215.7	212.3	210.1	205.6	204.4
10°	259.8	254.1	249.6	245.1	241.7	236.1	232.7	228.1	223.6	220.2	216.9
12.5°	294.8	286.9	280.1	275.6	267.7	260.9	254.1	250.7	241.7	237.2	231.5
15°	333.2	324.1	316.2	307.2	301.6	290.3	281.2	271.1	266.5	258.6	249.6
17.5°	382.9	368.2	355.8	346.7	335.4	324.1	314.0	303.8	290.3	281.2	269.9
20°	436.0	423.5	406.6	390.8	377.2	363.7	349.0	335.4	323.0	308.3	294.8
22.5°	503.7	485.7	465.3	449.5	431.4	416.8	396.4	378.4	358.0	338.8	323.0
25°	589.6	565.8	546.6	524.1	502.6	480.0	455.2	432.6	406.6	388.5	361.4
27.5°	695.7	673.1	647.2	617.8	596.3	562.5	529.7	501.5	471.0	442.7	412.2
30°	831.3	798.5	771.4	743.2	700.2	667.5	629.1	590.7	548.9	520.7	474.4
32.5°	993.9	958.9	918.2	877.6	838.0	791.7	744.3	696.9	650.6	598.6	551.2
35°	1192.7	1150.9	1104.6	1060.5	999.5	949.9	890.0	824.5	772.5	712.7	652.8
37.5°	1455.8	1386.9	1346.3	1300.0	1217.5	1149.8	1083.1	1017.6	926.1	862.9	778.2
40°	1785.6	1745.0	1678.3	1603.8	1529.3	1440.0	1349.7	1262.7	1156.5	1068.4	970.2
42.5°	2173.0	2113.2	2045.4	1938.1	1862.4	1757.4	1654.6	1539.4	1409.5	1296.6	1181.4
45°	2536.7	2465.6	2413.6	2306.3	2227.2	2103.0	1978.8	1856.8	1706.6	1560.9	1427.6
47.5°	2929.8	2871.0	2785.2	2698.2	2618.0	2478.0	2343.6	2195.6	2037.5	1864.7	1691.9
50°	3275.4	3229.1	3170.3	3065.3	2976.1	2858.6	2700.5	2539.0	2339.1	2167.4	1970.9
52.5°	3569.0	3532.9	3450.4	3375.9	3295.7	3185.0	3043.8	2889.1	2673.4	2484.8	2261.1
55°	3915.7	3889.8	3817.5	3771.2	3700.0	3593.9	3461.7	3318.3	3090.1	2884.6	2631.6
57.5°	4483.9	4463.5	4400.3	4381.1	4311.1	4218.4	4055.8	3902.2	3635.6	3380.4	3091.3
60°	5424.7	5384.0	5291.4	5244.0	5096.0	4971.8	4760.6	4549.4	4227.5	3902.2	3554.3
62.5°	6432.1	6318.1	6141.9	5990.5	5780.4	5564.7	5282.4	4959.3	4582.1	4195.8	3796.0
65°	6975.4	6781.1	6558.6	6318.1	6045.9	5728.5	5372.7	4985.3	4579.9	4172.1	3749.7
66°	7037.5	6818.4	6582.3	6314.7	6012.0	5674.3	5312.9	4906.3	4485.0	4087.4	3665.0
67.5°	6959.6	6730.3	6480.7	6183.7	5856.1	5506.0	5126.5	4704.1	4298.6	3895.4	3484.3
70°	6414.1	6185.9	5963.4	5650.6	5301.6	4949.2	4590.0	4117.9	3733.9	3363.5	2997.5
72.5°	5122.0	4967.3	4747.0	4479.3	4139.4	3726.0	3426.7	3004.3	2671.1	2312.0	2028.5
75°	3200.8	2982.8	2710.6	2369.6	2109.8	1774.3	1599.3	1278.5	1088.8	922.7	762.4
77.5°	1636.6	1472.8	1281.9	1089.9	905.8	722.8	559.1	395.3	266.5	185.2	137.8
80°	1351.9	1207.4	1049.2	874.2	711.5	552.3	397.6	271.1	172.8	112.9	88.1
82.5°	1117.0	995.0	853.9	691.2	550.0	433.7	301.6	196.5	122.0	79.1	62.1
85°	475.5	431.4	333.2	264.3	198.8	146.8	102.8	68.9	48.6	39.5	36.1
87.5°	20.3	22.6	21.5	16.9	12.4	12.4	11.3	9.0	9.0	9.0	9.0
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3	177.3
2.5°	185.2	184.1	183.0	183.0	181.8	180.7	173.9	168.3	161.5	157.0	152.5
5°	193.1	192.0	189.7	188.6	186.4	185.2	170.5	158.1	148.0	140.0	134.4
7.5°	201.0	199.9	196.5	193.1	192.0	189.7	166.0	150.2	136.7	127.6	122.0
10°	211.2	207.8	204.4	199.9	196.5	193.1	161.5	141.2	126.5	118.6	112.9
12.5°	225.9	220.2	214.6	208.9	204.4	198.8	159.3	133.3	118.6	109.6	103.9
15°	242.8	234.9	228.1	221.4	213.5	207.8	154.7	126.5	111.8	102.8	96.0
17.5°	258.6	249.6	239.4	229.3	221.4	213.5	150.2	119.7	105.0	96.0	89.2
20°	281.2	267.7	255.3	242.8	231.5	221.4	143.4	112.9	99.4	89.2	82.4
22.5°	306.1	290.3	274.5	257.5	242.8	229.3	137.8	107.3	93.7	83.6	75.7
25°	337.7	318.5	297.0	275.6	258.6	240.6	132.1	101.6	88.1	77.9	70.0
27.5°	381.7	354.6	330.9	303.8	277.8	257.5	127.6	97.1	82.4	72.3	64.4
30°	441.6	402.1	364.8	335.4	304.9	275.6	123.1	91.5	77.9	66.6	57.6
32.5°	508.2	461.9	419.0	375.0	336.6	302.7	118.6	87.0	72.3	61.0	53.1
35°	590.7	532.0	474.4	423.5	377.2	332.1	114.1	82.4	67.8	55.3	47.4
37.5°	709.3	635.9	560.2	494.7	434.8	375.0	110.7	77.9	62.1	49.7	41.8
40°	871.9	777.1	684.4	595.2	517.3	442.7	106.2	73.4	57.6	45.2	37.3
42.5°	1048.1	932.9	810.9	710.4	603.1	509.4	101.6	68.9	53.1	40.7	32.8
45°	1267.2	1123.8	975.8	839.2	708.2	587.3	97.1	64.4	47.4	36.1	28.2
47.5°	1506.7	1323.7	1156.5	984.9	829.0	684.4	91.5	61.0	42.9	31.6	24.8
50°	1752.9	1559.7	1348.5	1153.2	967.9	781.6	85.8	55.3	38.4	28.2	20.3
52.5°	2018.3	1790.2	1574.4	1331.6	1115.9	909.2	80.2	50.8	35.0	24.8	16.9
55°	2356.0	2100.7	1847.8	1575.6	1315.8	1057.2	74.5	45.2	30.5	21.5	13.6
57.5°	2780.7	2478.0	2167.4	1860.2	1545.1	1251.4	70.0	39.5	26.0	18.1	11.3
60°	3181.6	2828.1	2452.0	2098.5	1742.7	1400.5	63.2	35.0	22.6	14.7	11.3
62.5°	3389.4	2986.2	2580.8	2191.1	1811.6	1453.6	56.5	29.4	19.2	12.4	10.2
65°	3338.6	2927.5	2534.5	2141.4	1769.8	1419.7	49.7	26.0	16.9	11.3	10.2
66°	3265.2	2858.6	2463.3	2089.5	1734.8	1383.6	46.3	24.8	15.8	11.3	9.0
67.5°	3104.8	2711.8	2334.5	1986.7	1638.8	1314.7	41.8	22.6	14.7	10.2	9.0
70°	2651.9	2295.0	1993.5	1684.0	1400.5	1108.0	33.9	19.2	12.4	9.0	9.0
72.5°	1755.1	1512.3	1311.3	1128.3	943.1	731.9	28.2	15.8	10.2	9.0	7.9
75°	661.8	598.6	513.9	461.9	403.2	353.5	22.6	10.2	7.9	7.9	7.9
77.5°	117.5	108.4	96.0	88.1	81.3	74.5	18.1	6.8	6.8	7.9	7.9
80°	79.1	73.4	66.6	61.0	56.5	50.8	12.4	5.6	6.8	6.8	7.9
82.5°	56.5	53.1	49.7	45.2	41.8	37.3	7.9	5.6	6.8	6.8	6.8
85°	33.9	31.6	29.4	27.1	23.7	22.6	5.6	5.6	5.6	6.8	6.8
87.5°	9.0	7.9	9.0	9.0	6.8	7.9	4.5	4.5	4.5	5.6	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



TEST NUMBER: P150676

CATALOG NUMBER: TLM-F04-LED-E1-SL3-HSS-7050

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	177.3	177.3	177.3	177.3	177.3
2.5°	150.2	150.2	148.0	151.3	151.3
5°	129.9	129.9	128.8	129.9	129.9
7.5°	118.6	117.5	117.5	117.5	118.6
10°	108.4	107.3	107.3	107.3	107.3
12.5°	99.4	98.3	97.1	98.3	98.3
15°	91.5	89.2	89.2	89.2	89.2
17.5°	84.7	82.4	81.3	81.3	81.3
20°	77.9	74.5	74.5	74.5	74.5
22.5°	71.2	67.8	67.8	67.8	67.8
25°	64.4	61.0	61.0	61.0	61.0
27.5°	58.7	55.3	55.3	55.3	55.3
30°	52.0	49.7	49.7	50.8	49.7
32.5°	47.4	44.0	44.0	45.2	45.2
35°	41.8	39.5	39.5	39.5	39.5
37.5°	36.1	33.9	33.9	33.9	33.9
40°	31.6	29.4	28.2	29.4	29.4
42.5°	27.1	24.8	23.7	23.7	23.7
45°	23.7	20.3	19.2	20.3	20.3
47.5°	19.2	16.9	16.9	18.1	18.1
50°	14.7	14.7	15.8	18.1	18.1
52.5°	13.6	13.6	15.8	18.1	18.1
55°	12.4	13.6	15.8	16.9	18.1
57.5°	11.3	13.6	15.8	16.9	16.9
60°	11.3	12.4	14.7	16.9	16.9
62.5°	10.2	11.3	13.6	15.8	15.8
65°	10.2	11.3	13.6	15.8	15.8
66°	10.2	11.3	13.6	15.8	15.8
67.5°	10.2	11.3	13.6	15.8	15.8
70°	10.2	11.3	13.6	14.7	14.7
72.5°	9.0	10.2	12.4	14.7	14.7
75°	9.0	10.2	12.4	14.7	14.7
77.5°	9.0	10.2	12.4	14.7	14.7
80°	9.0	10.2	12.4	13.6	14.7
82.5°	7.9	10.2	11.3	13.6	13.6
85°	7.9	9.0	11.3	12.4	13.6
87.5°	6.8	7.9	9.0	11.3	11.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)