

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: P151816

Luminaire Tested: **TLM-F04-LED-E1-SL4-HSS-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P151816
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-7050
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 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: 6894.5 lumens
Efficiency: N/A
Efficacy: 67.5 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

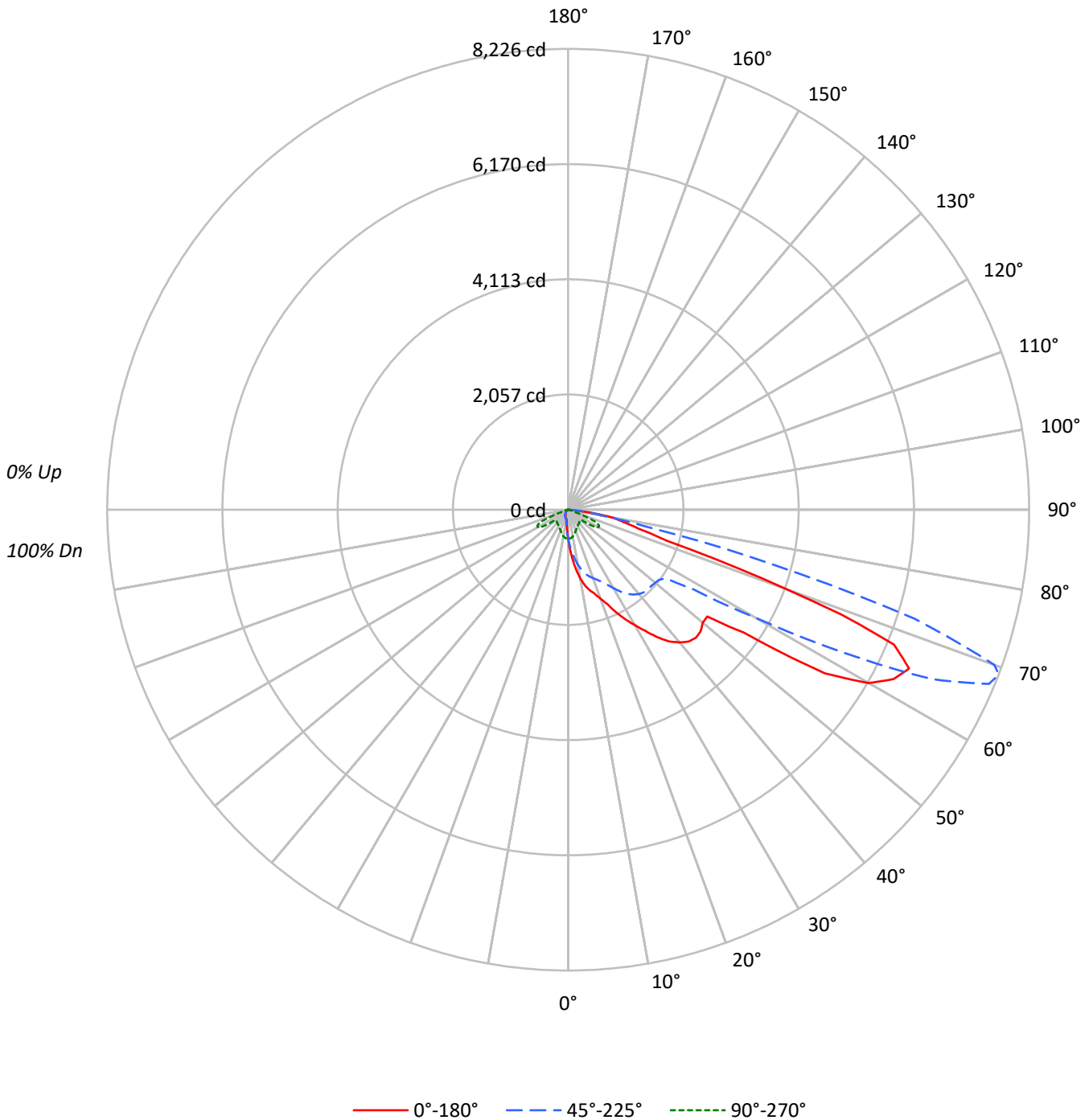
Input Watts (W): 102.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	8365	8365	8365
5°	14298	8251	4390
10°	20359	7886	2819
15°	24759	7252	2555
20°	28886	6758	2317
25°	35758	6467	2042
30°	44125	6328	1738
35°	54536	6268	1461
40°	64877	6371	1351
45°	73338	6646	1386
50°	78362	7311	1270
55°	107083	12655	759
60°	198834	20069	543
65°	255118	21683	517
70°	192634	8967	582
75°	80204	3433	701
80°	73246	3238	944
85°	6452	2912	1659



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.5	0.8
10°-20°	184.5	2.7
20°-30°	353.1	5.1
30°-40°	587.3	8.5
40°-50°	794.7	11.5
50°-60°	1242.8	18.0
60°-70°	2555.2	37.1
70°-80°	1028.2	14.9
80°-90°	95.1	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°	591.2	8.6
0°-40°	1178.5	17.1
0°-60°	3216.0	46.6
0°-90°	6894.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6894.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	521	521	521	521	521	
5°	887	754	512	325	272	95
15°	1489	1180	436	162	154	425
25°	2017	1421	365	129	115	945
35°	2781	1834	320	92	74	1744
45°	3228	2008	292	60	61	2467
55°	3823	2135	452	40	27	3855
65°	6711	7156	570	19	14	6148
75°	1292	3768	55	8	11	1732
85°	35	151	16	6	9	217
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°	520.7	520.7	520.7	520.7	520.7	520.7	520.7	520.7	520.7	520.7	520.7
2.5°	694.6	686.7	677.7	677.7	666.4	666.4	659.6	641.5	639.3	629.1	618.9
5°	886.6	879.8	868.5	858.4	849.3	833.5	822.2	800.8	777.1	754.5	734.1
7.5°	1074.1	1070.7	1050.4	1047.0	1032.3	1006.3	983.7	952.1	911.5	879.8	842.6
10°	1248.0	1240.1	1235.6	1216.4	1194.9	1166.7	1131.7	1093.3	1045.9	996.2	943.1
12.5°	1385.8	1381.3	1361.0	1353.1	1330.5	1302.2	1258.2	1208.5	1161.1	1096.7	1034.6
15°	1488.6	1480.7	1467.1	1454.7	1427.6	1402.8	1362.1	1307.9	1250.3	1180.3	1105.7
17.5°	1574.4	1559.7	1556.4	1537.2	1508.9	1479.6	1434.4	1384.7	1316.9	1246.9	1165.6
20°	1689.6	1669.3	1662.5	1634.3	1601.5	1560.9	1508.9	1446.8	1375.7	1298.8	1215.3
22.5°	1825.2	1810.5	1795.8	1771.0	1729.2	1671.6	1595.9	1528.1	1437.8	1353.1	1262.7
25°	2017.2	2004.7	1981.0	1947.1	1895.2	1826.3	1734.8	1635.4	1529.3	1420.8	1314.7
27.5°	2203.5	2192.2	2175.3	2149.3	2090.6	2014.9	1902.0	1775.5	1641.1	1510.1	1392.6
30°	2378.6	2368.4	2351.5	2325.5	2273.6	2199.0	2071.4	1935.9	1768.7	1616.2	1475.0
32.5°	2567.2	2563.8	2544.6	2507.3	2462.2	2361.6	2222.7	2077.0	1907.6	1731.4	1566.5
35°	2780.7	2754.7	2736.6	2699.3	2622.5	2515.2	2352.6	2193.4	2014.9	1834.2	1650.1
37.5°	2961.4	2936.5	2913.9	2866.5	2772.8	2636.1	2452.0	2276.9	2092.8	1908.7	1721.3
40°	3093.5	3081.1	3054.0	2991.9	2886.8	2724.2	2525.4	2334.5	2149.3	1964.1	1778.9
42.5°	3191.8	3172.6	3142.1	3077.7	2953.5	2768.2	2554.8	2358.3	2175.3	1998.0	1816.1
45°	3227.9	3212.1	3183.9	3113.8	2979.4	2780.7	2553.7	2351.5	2176.4	2008.1	1841.0
47.5°	3206.5	3190.7	3165.8	3100.3	2968.2	2766.0	2533.3	2332.3	2165.1	2011.5	1863.6
50°	3135.3	3126.3	3107.1	3051.7	2933.1	2737.7	2515.2	2322.1	2162.9	2028.5	1895.2
52.5°	3128.5	3122.9	3099.2	3043.8	2923.0	2728.7	2513.0	2327.8	2182.1	2049.9	1917.8
55°	3823.1	3742.9	3563.4	3410.9	3160.2	2862.0	2627.1	2419.2	2263.4	2134.6	2042.0
57.5°	5433.7	5314.0	5077.9	4787.7	4211.7	3645.8	3192.9	2865.4	2703.9	2645.1	2680.1
60°	6188.2	6166.7	6129.4	5991.6	5696.9	5210.1	4668.0	4081.8	3846.9	3826.5	3897.7
62.5°	6546.2	6532.6	6543.9	6527.0	6435.5	6293.2	6137.3	5884.4	5651.7	5501.5	5183.0
65°	6711.1	6720.1	6784.5	6835.3	6846.6	6883.9	6998.0	7313.1	7543.5	7156.1	6271.7
67.5°	6292.1	6345.2	6493.1	6678.3	6895.2	7105.3	7444.1	8108.2	8581.4	8126.3	6870.3
69°	5209.0	5234.9	5596.3	5945.3	6475.0	6845.5	7336.8	8207.6	8739.6	8225.7	6822.9
70°	4101.0	4124.7	4512.1	4986.5	5882.1	6358.7	7001.4	8039.3	8591.6	8093.5	6579.0
72.5°	1850.0	1816.1	1952.8	2206.9	3180.5	3937.2	5061.0	6513.4	7088.3	6484.1	4922.1
75°	1292.1	1277.4	1292.1	1293.2	1444.5	1863.6	2351.5	3530.6	4366.4	3767.8	2351.5
77.5°	1000.7	990.5	980.3	969.1	987.1	1105.7	1153.2	1252.5	1626.4	1538.3	896.8
80°	791.7	782.7	807.5	799.6	799.6	813.2	804.2	766.9	696.9	646.0	578.3
82.5°	368.2	370.5	370.5	402.1	484.5	565.8	591.8	554.6	492.4	419.0	337.7
85°	35.0	39.5	66.6	102.8	204.4	230.4	231.5	192.0	192.0	151.3	122.0
87.5°	0.0	1.1	1.1	1.1	10.2	28.2	23.7	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°	520.7	520.7	520.7	520.7	520.7	520.7	520.7	520.7	520.7	520.7	520.7
2.5°	600.9	597.5	583.9	570.4	557.9	544.4	532.0	519.5	506.0	495.8	483.4
5°	702.5	677.7	649.4	622.3	595.2	567.0	537.6	511.6	484.5	459.7	436.0
7.5°	805.3	756.7	718.3	669.8	625.7	581.7	541.0	499.2	460.8	424.7	390.8
10°	892.3	833.5	773.7	711.5	648.3	589.6	533.1	483.4	432.6	388.5	346.7
12.5°	963.4	888.9	815.5	737.5	666.4	591.8	521.8	461.9	402.1	352.4	309.5
15°	1027.8	941.9	853.9	763.5	673.1	588.4	510.5	436.0	375.0	318.5	269.9
17.5°	1079.7	981.5	882.1	780.4	683.3	583.9	495.8	417.9	346.7	288.0	240.6
20°	1124.9	1022.1	914.8	800.8	690.1	582.8	483.4	395.3	321.9	259.8	213.5
22.5°	1166.7	1063.9	948.7	826.7	700.2	581.7	472.1	378.4	300.4	238.3	192.0
25°	1214.1	1105.7	984.9	853.9	718.3	586.2	465.3	364.8	281.2	218.0	175.1
27.5°	1267.2	1153.2	1027.8	887.7	742.0	595.2	463.1	350.1	264.3	198.8	161.5
30°	1341.8	1209.6	1070.7	921.6	763.5	605.4	460.8	341.1	247.3	184.1	148.0
32.5°	1407.3	1265.0	1118.1	956.6	787.2	615.5	459.7	328.7	231.5	169.4	137.8
35°	1476.2	1315.8	1158.8	990.5	807.5	626.8	458.6	319.6	216.9	154.7	127.6
37.5°	1536.0	1358.7	1190.4	1019.9	830.1	637.0	459.7	311.7	203.3	142.3	118.6
40°	1586.9	1402.8	1225.4	1047.0	853.9	652.8	460.8	303.8	189.7	131.0	110.7
42.5°	1632.0	1444.5	1262.7	1077.5	881.0	670.9	467.6	297.0	178.5	120.8	102.8
45°	1667.0	1482.9	1303.4	1120.4	925.0	700.2	480.0	292.5	167.2	111.8	96.0
47.5°	1703.2	1539.4	1372.3	1188.2	989.4	746.6	501.5	291.4	158.1	105.0	90.4
50°	1752.9	1595.9	1433.3	1257.1	1048.1	794.0	527.4	292.5	146.8	98.3	84.7
52.5°	1789.0	1653.5	1512.3	1376.8	1188.2	938.6	628.0	312.9	141.2	92.6	77.9
55°	2002.5	1978.8	1982.2	2004.7	1859.0	1597.0	1050.4	451.8	166.0	105.0	76.8
57.5°	2823.6	2907.2	2955.7	2954.6	2714.0	2251.0	1410.7	580.5	185.2	122.0	91.5
60°	3903.3	3840.1	3750.9	3530.6	3211.0	2569.5	1577.8	624.6	160.4	97.1	83.6
62.5°	4857.7	4487.2	4158.6	3801.7	3382.7	2680.1	1611.7	621.2	140.0	73.4	58.7
65°	5452.9	4786.5	4255.7	3808.5	3314.9	2587.5	1524.7	570.4	118.6	59.9	48.6
67.5°	5595.2	4625.0	3874.0	3303.6	2769.4	2013.8	1119.3	429.2	92.6	49.7	42.9
69°	5284.6	4111.1	3209.9	2562.7	2014.9	1336.1	692.3	271.1	71.2	45.2	39.5
70°	4861.1	3575.8	2614.6	2056.7	1492.0	938.6	484.5	190.9	57.6	41.8	36.1
72.5°	3127.4	1878.2	1285.3	894.5	615.5	373.8	189.7	85.8	44.0	35.0	29.4
75°	1213.0	694.6	503.7	382.9	299.3	207.8	115.2	55.3	37.3	29.4	22.6
77.5°	597.5	457.4	373.8	256.4	149.1	92.6	62.1	42.9	30.5	21.5	14.7
80°	472.1	314.0	187.5	116.3	88.1	66.6	47.4	35.0	22.6	13.6	10.2
82.5°	241.7	132.1	97.1	79.1	65.5	52.0	38.4	24.8	14.7	9.0	7.9
85°	75.7	55.3	49.7	48.6	45.2	37.3	27.1	15.8	9.0	5.6	5.6
87.5°	5.6	7.9	10.2	7.9	9.0	7.9	10.2	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°	520.7	520.7	520.7	520.7	520.7	520.7	520.7	520.7	520.7	520.7	520.7
2.5°	474.4	460.8	448.4	440.5	425.8	420.1	414.5	412.2	402.1	404.3	395.3
5°	414.5	390.8	372.7	354.6	337.7	325.3	315.1	302.7	292.5	288.0	279.0
7.5°	360.3	329.8	306.1	286.9	266.5	250.7	237.2	228.1	219.1	210.1	205.6
10°	312.9	280.1	253.0	233.8	214.6	201.0	190.9	184.1	178.5	175.1	173.9
12.5°	268.8	237.2	212.3	195.4	180.7	173.9	169.4	166.0	164.9	163.8	163.8
15°	234.9	203.3	184.1	171.7	164.9	161.5	160.4	158.1	155.9	154.7	154.7
17.5°	203.3	179.6	166.0	159.3	155.9	153.6	151.3	149.1	146.8	145.7	145.7
20°	181.8	162.6	155.9	151.3	148.0	145.7	142.3	140.0	138.9	137.8	136.7
22.5°	164.9	152.5	148.0	144.6	140.0	136.7	134.4	132.1	129.9	128.8	127.6
25°	152.5	144.6	141.2	136.7	132.1	128.8	125.4	122.0	119.7	118.6	116.3
27.5°	143.4	137.8	133.3	127.6	123.1	119.7	116.3	112.9	110.7	108.4	107.3
30°	135.5	129.9	124.2	119.7	114.1	110.7	106.2	102.8	101.6	99.4	97.1
32.5°	127.6	122.0	116.3	110.7	105.0	100.5	98.3	93.7	91.5	90.4	88.1
35°	118.6	112.9	106.2	101.6	96.0	91.5	88.1	84.7	82.4	80.2	79.1
37.5°	110.7	103.9	97.1	91.5	87.0	82.4	79.1	75.7	73.4	71.2	70.0
40°	101.6	94.9	88.1	82.4	77.9	74.5	71.2	67.8	65.5	64.4	64.4
42.5°	93.7	85.8	79.1	74.5	71.2	66.6	63.2	59.9	58.7	57.6	58.7
45°	85.8	77.9	72.3	67.8	64.4	59.9	56.5	54.2	53.1	54.2	55.3
47.5°	79.1	71.2	65.5	62.1	58.7	55.3	52.0	49.7	49.7	52.0	54.2
50°	72.3	64.4	59.9	57.6	54.2	50.8	46.3	45.2	46.3	48.6	50.8
52.5°	65.5	56.5	53.1	52.0	48.6	45.2	41.8	40.7	41.8	44.0	42.9
55°	58.7	49.7	48.6	47.4	44.0	39.5	36.1	36.1	36.1	35.0	32.8
57.5°	56.5	44.0	42.9	41.8	38.4	33.9	31.6	29.4	28.2	24.8	23.7
60°	58.7	39.5	39.5	37.3	33.9	29.4	26.0	22.6	20.3	18.1	18.1
62.5°	47.4	36.1	35.0	32.8	28.2	23.7	20.3	16.9	15.8	14.7	14.7
65°	38.4	32.8	30.5	27.1	23.7	19.2	15.8	13.6	12.4	12.4	13.6
67.5°	35.0	29.4	26.0	22.6	19.2	14.7	12.4	11.3	11.3	12.4	12.4
69°	32.8	27.1	23.7	20.3	16.9	13.6	11.3	11.3	11.3	11.3	12.4
70°	30.5	26.0	22.6	19.2	14.7	11.3	10.2	10.2	11.3	11.3	12.4
72.5°	23.7	20.3	19.2	15.8	11.3	10.2	9.0	10.2	10.2	11.3	11.3
75°	18.1	14.7	14.7	12.4	9.0	7.9	7.9	9.0	9.0	10.2	10.2
77.5°	12.4	10.2	10.2	9.0	7.9	6.8	6.8	7.9	9.0	9.0	10.2
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: P151816

CATALOG NUMBER: TLM-F04-LED-E1-SL4-HSS-7050

CANDELA DISTRIBUTION (continued):

	165°	170°	175°	180°
0°	520.7	520.7	520.7	520.7
2.5°	393.0	391.9	387.4	388.5
5°	275.6	268.8	273.3	272.2
7.5°	202.2	201.0	199.9	202.2
10°	172.8	172.8	171.7	172.8
12.5°	162.6	162.6	162.6	162.6
15°	154.7	154.7	153.6	153.6
17.5°	145.7	145.7	145.7	144.6
20°	136.7	135.5	135.5	135.5
22.5°	126.5	125.4	125.4	125.4
25°	116.3	115.2	115.2	115.2
27.5°	106.2	105.0	103.9	103.9
30°	96.0	94.9	93.7	93.7
32.5°	85.8	84.7	83.6	83.6
35°	76.8	76.8	75.7	74.5
37.5°	68.9	68.9	68.9	68.9
40°	63.2	64.4	64.4	64.4
42.5°	59.9	61.0	62.1	63.2
45°	57.6	59.9	61.0	61.0
47.5°	56.5	57.6	58.7	58.7
50°	52.0	50.8	50.8	50.8
52.5°	41.8	39.5	38.4	37.3
55°	30.5	29.4	27.1	27.1
57.5°	21.5	21.5	20.3	20.3
60°	16.9	16.9	15.8	16.9
62.5°	14.7	14.7	14.7	14.7
65°	13.6	13.6	13.6	13.6
67.5°	13.6	13.6	13.6	13.6
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°	10.2	11.3	11.3	11.3
77.5°	10.2	10.2	10.2	10.2
80°	9.0	9.0	10.2	10.2
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)