

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: P151811

Luminaire Tested: **TLM-E04-LED-E1-SL4-HSS-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P151811  
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-7050  
Description: TALON MEDIUM LED SITE LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND  
HOUSE SIDE SHIELD  
Light Source: (84) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

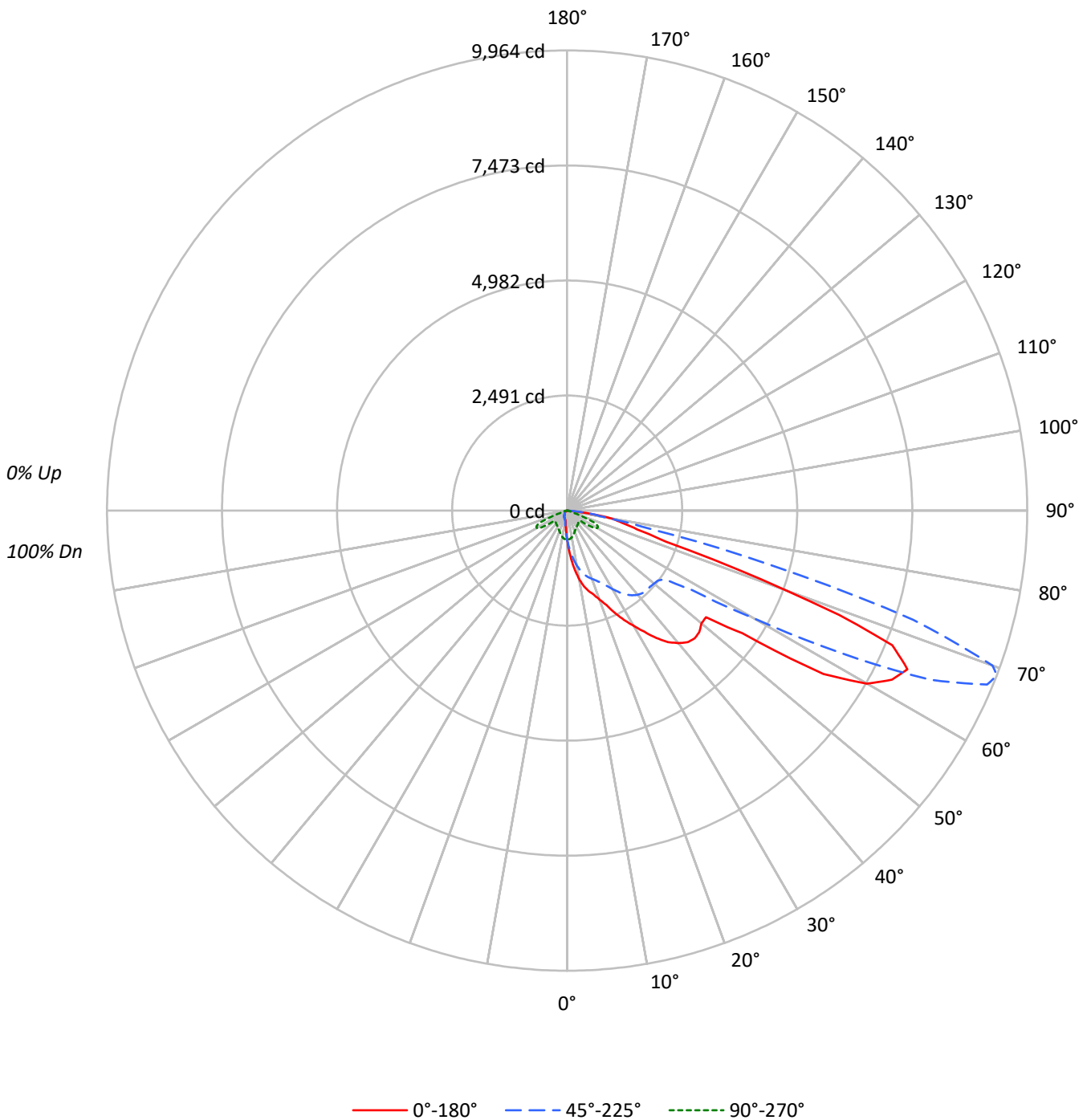
Lumens per Lamp: N/A  
Luminaire Lumens: 8351.7 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Spacing Criteria (0/90/45): 4.24 / 0.98 / 4.1  
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 97.2  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P151811  
CATALOG NUMBER: TLM-E04-LED-E1-SL4-HSS-7050

### 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°	10133	10133	10133
5°	17320	9995	5317
10°	24663	9553	3414
15°	29991	8784	3095
20°	34992	8186	2807
25°	43314	7833	2475
30°	53451	7665	2107
35°	66062	7594	1771
40°	78589	7718	1636
45°	88838	8050	1679
50°	94926	8855	1540
55°	129717	15330	919
60°	240855	24310	659
65°	309037	26264	623
70°	233345	10860	705
75°	97156	4159	850
80°	88734	3923	1138
85°	7816	3539	2009



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.8	0.8
10°-20°	223.5	2.7
20°-30°	427.8	5.1
30°-40°	711.4	8.5
40°-50°	962.7	11.5
50°-60°	1505.5	18.0
60°-70°	3095.3	37.1
70°-80°	1245.5	14.9
80°-90°	115.2	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°	716.1	8.6
0°-40°	1427.5	17.1
0°-60°	3895.7	46.6
0°-90°	8351.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8351.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	631	631	631	631	631	
5°	1074	914	620	394	330	116
15°	1803	1430	528	196	186	515
25°	2444	1721	442	156	140	1144
35°	3368	2222	387	111	90	2112
45°	3910	2433	354	72	74	2989
55°	4631	2586	547	48	33	4670
65°	8130	8668	691	23	16	7447
75°	1565	4564	67	10	14	2098
85°	42	183	19	7	11	263
90°	0	0	0	0	0	



TEST NUMBER: P151811

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	630.7	630.7	630.7	630.7	630.7	630.7	630.7	630.7	630.7	630.7	630.7
2.5°	841.4	831.8	820.9	820.9	807.2	807.2	799.0	777.1	774.4	762.1	749.7
5°	1074.0	1065.8	1052.1	1039.8	1028.8	1009.7	996.0	970.0	941.3	913.9	889.3
7.5°	1301.1	1297.0	1272.4	1268.3	1250.5	1219.0	1191.7	1153.3	1104.1	1065.8	1020.6
10°	1511.8	1502.2	1496.7	1473.5	1447.5	1413.3	1370.9	1324.4	1266.9	1206.7	1142.4
12.5°	1678.7	1673.2	1648.6	1639.0	1611.7	1577.5	1524.1	1463.9	1406.4	1328.5	1253.2
15°	1803.2	1793.6	1777.2	1762.2	1729.3	1699.2	1650.0	1584.3	1514.5	1429.7	1339.4
17.5°	1907.2	1889.4	1885.3	1862.0	1827.8	1792.3	1737.5	1677.3	1595.3	1510.4	1411.9
20°	2046.7	2022.1	2013.9	1979.7	1940.0	1890.8	1827.8	1752.6	1666.4	1573.4	1472.1
22.5°	2210.9	2193.1	2175.3	2145.2	2094.6	2024.8	1933.2	1851.1	1741.6	1639.0	1529.6
25°	2443.5	2428.4	2399.7	2358.7	2295.7	2212.3	2101.5	1981.1	1852.5	1721.1	1592.5
27.5°	2669.2	2655.6	2635.0	2603.6	2532.4	2440.8	2303.9	2150.7	1987.9	1829.2	1686.9
30°	2881.3	2869.0	2848.5	2817.0	2754.1	2663.8	2509.2	2345.0	2142.5	1957.8	1786.8
32.5°	3109.8	3105.7	3082.4	3037.3	2982.5	2860.8	2692.5	2516.0	2310.8	2097.4	1897.6
35°	3368.4	3336.9	3315.0	3269.9	3176.8	3046.8	2849.8	2656.9	2440.8	2221.9	1998.9
37.5°	3587.3	3557.2	3529.8	3472.3	3358.8	3193.2	2970.2	2758.2	2535.2	2312.2	2085.0
40°	3747.3	3732.3	3699.5	3624.2	3497.0	3300.0	3059.2	2827.9	2603.6	2379.2	2154.8
42.5°	3866.4	3843.1	3806.2	3728.2	3577.7	3353.3	3094.7	2856.7	2635.0	2420.2	2200.0
45°	3910.1	3891.0	3856.8	3772.0	3609.2	3368.4	3093.4	2848.5	2636.4	2432.6	2230.1
47.5°	3884.2	3865.0	3834.9	3755.5	3595.5	3350.6	3068.7	2825.2	2622.7	2436.7	2257.4
50°	3798.0	3787.0	3763.8	3696.7	3553.1	3316.4	3046.8	2812.9	2620.0	2457.2	2295.7
52.5°	3789.7	3782.9	3754.2	3687.1	3540.7	3305.4	3044.1	2819.7	2643.2	2483.2	2323.1
55°	4631.2	4534.0	4316.5	4131.8	3828.1	3466.9	3182.3	2930.6	2741.8	2585.8	2473.6
57.5°	6582.1	6437.1	6151.2	5799.5	5101.8	4416.4	3867.7	3471.0	3275.3	3204.2	3246.6
60°	7496.0	7470.0	7424.9	7258.0	6900.9	6311.2	5654.5	4944.5	4659.9	4635.3	4721.5
62.5°	7929.7	7913.3	7927.0	7906.5	7795.7	7623.3	7434.5	7128.0	6846.2	6664.2	6278.4
65°	8129.5	8140.4	8218.4	8280.0	8293.7	8338.8	8477.0	8858.7	9137.8	8668.5	7597.3
67.5°	7621.9	7686.2	7865.4	8089.8	8352.5	8607.0	9017.4	9821.9	10395.1	9843.8	8322.4
69°	6309.9	6341.3	6779.1	7201.9	7843.6	8292.3	8887.4	9942.3	10586.7	9964.2	8264.9
70°	4967.7	4996.4	5465.7	6040.3	7125.3	7702.6	8481.1	9738.4	10407.4	9804.1	7969.4
72.5°	2241.0	2200.0	2365.5	2673.3	3852.7	4769.3	6130.6	7890.1	8586.5	7854.5	5962.4
75°	1565.2	1547.4	1565.2	1566.5	1749.9	2257.4	2848.5	4276.8	5289.2	4564.1	2848.5
77.5°	1212.2	1199.9	1187.5	1173.9	1195.8	1339.4	1396.9	1517.3	1970.1	1863.4	1086.3
80°	959.1	948.1	978.2	968.6	968.6	985.1	974.1	929.0	844.1	782.6	700.5
82.5°	446.0	448.8	448.8	487.1	586.9	685.4	716.9	671.8	596.5	507.6	409.1
85°	42.4	47.9	80.7	124.5	247.6	279.1	280.5	232.6	232.6	183.3	147.8
87.5°	0.0	1.4	1.4	1.4	12.3	34.2	28.7	8.2	4.1	4.1	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



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	630.7	630.7	630.7	630.7	630.7	630.7	630.7	630.7	630.7	630.7	630.7
2.5°	727.9	723.7	707.3	690.9	675.9	659.4	644.4	629.3	612.9	600.6	585.6
5°	851.0	820.9	786.7	753.8	721.0	686.8	651.2	619.8	586.9	556.8	528.1
7.5°	975.5	916.7	870.1	811.3	757.9	704.6	655.3	604.7	558.2	514.4	473.4
10°	1080.8	1009.7	937.2	861.9	785.3	714.2	645.8	585.6	524.0	470.6	420.0
12.5°	1167.0	1076.7	987.8	893.4	807.2	716.9	632.1	559.6	487.1	426.9	374.9
15°	1245.0	1141.0	1034.3	924.9	815.4	712.8	618.4	528.1	454.2	385.8	327.0
17.5°	1307.9	1188.9	1068.5	945.4	827.7	707.3	600.6	506.2	420.0	348.9	291.4
20°	1362.7	1238.2	1108.2	970.0	835.9	706.0	585.6	478.8	389.9	314.7	258.6
22.5°	1413.3	1288.8	1149.2	1001.5	848.2	704.6	571.9	458.3	363.9	288.7	232.6
25°	1470.8	1339.4	1193.0	1034.3	870.1	710.1	563.7	441.9	340.7	264.1	212.1
27.5°	1535.1	1396.9	1245.0	1075.4	898.9	721.0	560.9	424.1	320.1	240.8	195.6
30°	1625.4	1465.3	1297.0	1116.4	924.9	733.3	558.2	413.2	299.6	223.0	179.2
32.5°	1704.7	1532.3	1354.5	1158.8	953.6	745.6	556.8	398.1	280.5	205.2	166.9
35°	1788.2	1593.9	1403.7	1199.9	978.2	759.3	555.5	387.2	262.7	187.4	154.6
37.5°	1860.7	1645.9	1442.0	1235.4	1005.6	771.6	556.8	377.6	246.3	172.4	143.7
40°	1922.2	1699.2	1484.4	1268.3	1034.3	790.8	558.2	368.0	229.8	158.7	134.1
42.5°	1977.0	1749.9	1529.6	1305.2	1067.1	812.7	566.4	359.8	216.2	146.4	124.5
45°	2019.4	1796.4	1578.8	1357.2	1120.5	848.2	581.5	354.3	202.5	135.4	116.3
47.5°	2063.2	1864.8	1662.3	1439.3	1198.5	904.3	607.5	353.0	191.5	127.2	109.5
50°	2123.4	1933.2	1736.2	1522.7	1269.6	961.8	638.9	354.3	177.9	119.0	102.6
52.5°	2167.1	2003.0	1831.9	1667.8	1439.3	1136.9	760.7	379.0	171.0	112.2	94.4
55°	2425.7	2397.0	2401.1	2428.4	2252.0	1934.6	1272.4	547.3	201.1	127.2	93.0
57.5°	3420.4	3521.6	3580.4	3579.1	3287.6	2726.7	1708.8	703.2	224.4	147.8	110.8
60°	4728.3	4651.7	4543.6	4276.8	3889.6	3112.5	1911.3	756.6	194.3	117.7	101.2
62.5°	5884.4	5435.6	5037.5	4605.2	4097.6	3246.6	1952.3	752.5	169.6	88.9	71.1
65°	6605.4	5798.2	5155.2	4613.4	4015.5	3134.4	1847.0	690.9	143.7	72.5	58.8
67.5°	6777.8	5602.5	4692.7	4001.8	3354.7	2439.4	1355.8	519.9	112.2	60.2	52.0
69°	6401.5	4980.0	3888.3	3104.3	2440.8	1618.5	838.7	328.4	86.2	54.7	47.9
70°	5888.5	4331.5	3167.2	2491.4	1807.3	1136.9	586.9	231.2	69.8	50.6	43.8
72.5°	3788.4	2275.2	1556.9	1083.6	745.6	452.9	229.8	104.0	53.4	42.4	35.6
75°	1469.4	841.4	610.2	463.8	362.6	251.7	139.6	67.0	45.1	35.6	27.4
77.5°	723.7	554.1	452.9	310.6	180.6	112.2	75.2	52.0	36.9	26.0	17.8
80°	571.9	380.3	227.1	140.9	106.7	80.7	57.5	42.4	27.4	16.4	12.3
82.5°	292.8	160.1	117.7	95.8	79.4	62.9	46.5	30.1	17.8	10.9	9.6
85°	91.7	67.0	60.2	58.8	54.7	45.1	32.8	19.2	10.9	6.8	6.8
87.5°	6.8	9.6	12.3	9.6	10.9	9.6	12.3	8.2	5.5	5.5	4.1
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°	630.7	630.7	630.7	630.7	630.7	630.7	630.7	630.7	630.7	630.7	630.7
2.5°	574.6	558.2	543.2	533.6	515.8	508.9	502.1	499.4	487.1	489.8	478.8
5°	502.1	473.4	451.5	429.6	409.1	394.0	381.7	366.7	354.3	348.9	337.9
7.5°	436.4	399.5	370.8	347.5	322.9	303.7	287.3	276.4	265.4	254.5	249.0
10°	379.0	339.3	306.5	283.2	259.9	243.5	231.2	223.0	216.2	212.1	210.7
12.5°	325.6	287.3	257.2	236.7	218.9	210.7	205.2	201.1	199.7	198.4	198.4
15°	284.6	246.3	223.0	208.0	199.7	195.6	194.3	191.5	188.8	187.4	187.4
17.5°	246.3	217.5	201.1	192.9	188.8	186.1	183.3	180.6	177.9	176.5	176.5
20°	220.3	197.0	188.8	183.3	179.2	176.5	172.4	169.6	168.3	166.9	165.5
22.5°	199.7	184.7	179.2	175.1	169.6	165.5	162.8	160.1	157.3	156.0	154.6
25°	184.7	175.1	171.0	165.5	160.1	156.0	151.9	147.8	145.0	143.7	140.9
27.5°	173.8	166.9	161.4	154.6	149.1	145.0	140.9	136.8	134.1	131.3	130.0
30°	164.2	157.3	150.5	145.0	138.2	134.1	128.6	124.5	123.1	120.4	117.7
32.5°	154.6	147.8	140.9	134.1	127.2	121.8	119.0	113.6	110.8	109.5	106.7
35°	143.7	136.8	128.6	123.1	116.3	110.8	106.7	102.6	99.9	97.1	95.8
37.5°	134.1	125.9	117.7	110.8	105.3	99.9	95.8	91.7	88.9	86.2	84.8
40°	123.1	114.9	106.7	99.9	94.4	90.3	86.2	82.1	79.4	78.0	78.0
42.5°	113.6	104.0	95.8	90.3	86.2	80.7	76.6	72.5	71.1	69.8	71.1
45°	104.0	94.4	87.6	82.1	78.0	72.5	68.4	65.7	64.3	65.7	67.0
47.5°	95.8	86.2	79.4	75.2	71.1	67.0	62.9	60.2	60.2	62.9	65.7
50°	87.6	78.0	72.5	69.8	65.7	61.6	56.1	54.7	56.1	58.8	61.6
52.5°	79.4	68.4	64.3	62.9	58.8	54.7	50.6	49.3	50.6	53.4	52.0
55°	71.1	60.2	58.8	57.5	53.4	47.9	43.8	43.8	43.8	42.4	39.7
57.5°	68.4	53.4	52.0	50.6	46.5	41.0	38.3	35.6	34.2	30.1	28.7
60°	71.1	47.9	47.9	45.1	41.0	35.6	31.5	27.4	24.6	21.9	21.9
62.5°	57.5	43.8	42.4	39.7	34.2	28.7	24.6	20.5	19.2	17.8	17.8
65°	46.5	39.7	36.9	32.8	28.7	23.3	19.2	16.4	15.0	15.0	16.4
67.5°	42.4	35.6	31.5	27.4	23.3	17.8	15.0	13.7	13.7	15.0	15.0
69°	39.7	32.8	28.7	24.6	20.5	16.4	13.7	13.7	13.7	13.7	15.0
70°	36.9	31.5	27.4	23.3	17.8	13.7	12.3	12.3	13.7	13.7	15.0
72.5°	28.7	24.6	23.3	19.2	13.7	12.3	10.9	12.3	12.3	13.7	13.7
75°	21.9	17.8	17.8	15.0	10.9	9.6	9.6	10.9	10.9	12.3	12.3
77.5°	15.0	12.3	12.3	10.9	9.6	8.2	8.2	9.6	10.9	10.9	12.3
80°	10.9	9.6	8.2	9.6	8.2	6.8	8.2	9.6	9.6	10.9	10.9
82.5°	8.2	8.2	8.2	8.2	6.8	6.8	8.2	8.2	9.6	10.9	10.9
85°	6.8	6.8	6.8	6.8	6.8	6.8	6.8	8.2	8.2	9.6	9.6
87.5°	4.1	4.1	4.1	5.5	5.5	6.8	6.8	6.8	6.8	8.2	8.2
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: P151811

CATALOG NUMBER: TLM-E04-LED-E1-SL4-HSS-7050

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	630.7	630.7	630.7	630.7
2.5°	476.1	474.7	469.3	470.6
5°	333.8	325.6	331.1	329.7
7.5°	244.9	243.5	242.2	244.9
10°	209.3	209.3	208.0	209.3
12.5°	197.0	197.0	197.0	197.0
15°	187.4	187.4	186.1	186.1
17.5°	176.5	176.5	176.5	175.1
20°	165.5	164.2	164.2	164.2
22.5°	153.2	151.9	151.9	151.9
25°	140.9	139.6	139.6	139.6
27.5°	128.6	127.2	125.9	125.9
30°	116.3	114.9	113.6	113.6
32.5°	104.0	102.6	101.2	101.2
35°	93.0	93.0	91.7	90.3
37.5°	83.5	83.5	83.5	83.5
40°	76.6	78.0	78.0	78.0
42.5°	72.5	73.9	75.2	76.6
45°	69.8	72.5	73.9	73.9
47.5°	68.4	69.8	71.1	71.1
50°	62.9	61.6	61.6	61.6
52.5°	50.6	47.9	46.5	45.1
55°	36.9	35.6	32.8	32.8
57.5°	26.0	26.0	24.6	24.6
60°	20.5	20.5	19.2	20.5
62.5°	17.8	17.8	17.8	17.8
65°	16.4	16.4	16.4	16.4
67.5°	16.4	16.4	16.4	16.4
69°	15.0	15.0	15.0	15.0
70°	15.0	15.0	15.0	15.0
72.5°	13.7	13.7	13.7	13.7
75°	12.3	13.7	13.7	13.7
77.5°	12.3	12.3	12.3	12.3
80°	10.9	10.9	12.3	12.3
82.5°	10.9	10.9	10.9	10.9
85°	9.6	9.6	10.9	10.9
87.5°	8.2	8.2	9.6	9.6
90°	0.0	0.0	0.0	0.0

(END OF REPORT)