

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: P151791

Luminaire Tested: **TLM-E02-LED-E1-SL4-HSS-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P151791  
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-E02-LED-E1-SL4-HSS-7050  
Description: TALON MEDIUM LED SITE LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND  
HOUSE SIDE SHIELD  
Light Source: (42) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4175.9 lumens  
Efficiency: N/A  
Efficacy: 80.2 lumens/watt  
Spacing Criteria (0/90/45): 4.24 / 0.98 / 4.1  
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')  
CIE Type: Direct

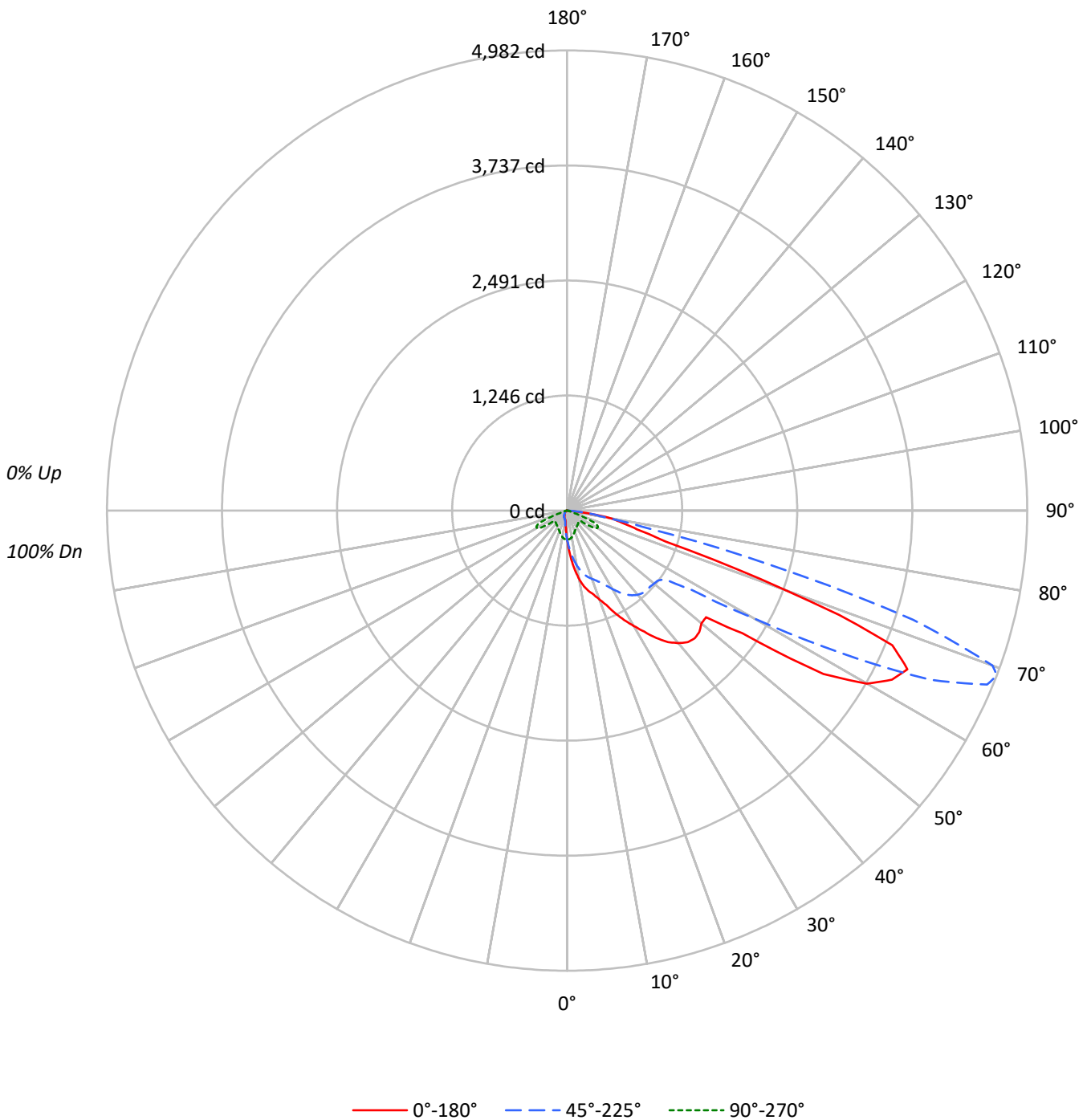
Input Watts (W): 52.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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CATALOG NUMBER: TLM-E02-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°	10288	10288	10288
5°	17583	10147	5399
10°	25036	9698	3468
15°	30446	8918	3140
20°	35524	8310	2850
25°	43969	7954	2512
30°	54262	7781	2139
35°	67063	7709	1796
40°	79782	7835	1661
45°	90186	8174	1702
50°	96364	8992	1563
55°	131683	15559	933
60°	244504	24679	672
65°	313716	26666	633
70°	236886	11025	715
75°	98628	4222	857
80°	90069	3982	1165
85°	7934	3593	2058



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CATALOG NUMBER: TLM-E02-LED-E1-SL4-HSS-7050

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	32.4	0.8
10°-20°	111.8	2.7
20°-30°	213.9	5.1
30°-40°	355.7	8.5
40°-50°	481.3	11.5
50°-60°	752.8	18.0
60°-70°	1547.6	37.1
70°-80°	622.7	14.9
80°-90°	57.6	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°	358.1	8.6
0°-40°	713.8	17.1
0°-60°	1947.9	46.6
0°-90°	4175.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4175.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	315	315	315	315	315	
5°	537	457	310	197	165	58
15°	902	715	264	98	93	258
25°	1222	861	221	78	70	572
35°	1684	1111	194	55	45	1056
45°	1955	1216	177	36	37	1494
55°	2316	1293	274	24	16	2335
65°	4065	4334	346	12	8	3724
75°	783	2282	34	5	7	1049
85°	21	92	10	3	6	131
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°	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4
2.5°	420.7	415.9	410.4	410.4	403.6	403.6	399.5	388.6	387.2	381.0	374.9
5°	537.0	532.9	526.1	519.9	514.4	504.8	498.0	485.0	470.6	457.0	444.6
7.5°	650.6	648.5	636.2	634.1	625.2	609.5	595.8	576.7	552.0	532.9	510.3
10°	755.9	751.1	748.4	736.7	723.7	706.6	685.4	662.2	633.4	603.4	571.2
12.5°	839.4	836.6	824.3	819.5	805.8	788.7	762.1	732.0	703.2	664.2	626.6
15°	901.6	896.8	888.6	881.1	864.7	849.6	825.0	792.2	757.3	714.9	669.7
17.5°	953.6	944.7	942.6	931.0	913.9	896.1	868.8	838.7	797.6	755.2	706.0
20°	1023.4	1011.1	1007.0	989.8	970.0	945.4	913.9	876.3	833.2	786.7	736.1
22.5°	1105.5	1096.6	1087.7	1072.6	1047.3	1012.4	966.6	925.5	870.8	819.5	764.8
25°	1221.7	1214.2	1199.9	1179.3	1147.9	1106.1	1050.7	990.5	926.2	860.6	796.3
27.5°	1334.6	1327.8	1317.5	1301.8	1266.2	1220.4	1152.0	1075.4	994.0	914.6	843.5
30°	1440.7	1434.5	1424.2	1408.5	1377.0	1331.9	1254.6	1172.5	1071.3	978.9	893.4
32.5°	1554.9	1552.8	1541.2	1518.6	1491.3	1430.4	1346.3	1258.0	1155.4	1048.7	948.8
35°	1684.2	1668.4	1657.5	1634.9	1588.4	1523.4	1424.9	1328.5	1220.4	1110.9	999.4
37.5°	1793.6	1778.6	1764.9	1736.2	1679.4	1596.6	1485.1	1379.1	1267.6	1156.1	1042.5
40°	1873.7	1866.1	1849.7	1812.1	1748.5	1650.0	1529.6	1414.0	1301.8	1189.6	1077.4
42.5°	1933.2	1921.6	1903.1	1864.1	1788.8	1676.7	1547.4	1428.3	1317.5	1210.1	1100.0
45°	1955.1	1945.5	1928.4	1886.0	1804.6	1684.2	1546.7	1424.2	1318.2	1216.3	1115.0
47.5°	1942.1	1932.5	1917.4	1877.8	1797.7	1675.3	1534.4	1412.6	1311.4	1218.3	1128.7
50°	1899.0	1893.5	1881.9	1848.4	1776.5	1658.2	1523.4	1406.4	1310.0	1228.6	1147.9
52.5°	1894.9	1891.5	1877.1	1843.6	1770.4	1652.7	1522.1	1409.9	1321.6	1241.6	1161.6
55°	2315.6	2267.0	2158.2	2065.9	1914.0	1733.4	1591.1	1465.3	1370.9	1292.9	1236.8
57.5°	3291.1	3218.6	3075.6	2899.8	2550.9	2208.2	1933.9	1735.5	1637.7	1602.1	1623.3
60°	3748.0	3735.0	3712.4	3629.0	3450.5	3155.6	2827.3	2472.2	2329.9	2317.6	2360.7
62.5°	3964.9	3956.7	3963.5	3953.2	3897.8	3811.6	3717.2	3564.0	3423.1	3332.1	3139.2
65°	4064.7	4070.2	4109.2	4140.0	4146.8	4169.4	4238.5	4429.4	4568.9	4334.3	3798.6
67.5°	3811.0	3843.1	3932.7	4044.9	4176.2	4303.5	4508.7	4910.9	5197.6	4921.9	4161.2
69°	3154.9	3170.7	3389.6	3600.9	3921.8	4146.2	4443.7	4971.1	5293.3	4982.1	4132.5
70°	2483.9	2498.2	2732.9	3020.2	3562.6	3851.3	4240.6	4869.2	5203.7	4902.0	3984.7
72.5°	1120.5	1100.0	1182.8	1336.7	1926.3	2384.7	3065.3	3945.0	4293.2	3927.2	2981.2
75°	782.6	773.7	782.6	783.3	874.9	1128.7	1424.2	2138.4	2644.6	2282.1	1424.2
77.5°	606.1	599.9	593.8	586.9	597.9	669.7	698.4	758.6	985.1	931.7	543.2
80°	479.5	474.1	489.1	484.3	484.3	492.5	487.1	464.5	422.1	391.3	350.2
82.5°	223.0	224.4	224.4	243.5	293.5	342.7	358.5	335.9	298.3	253.8	204.5
85°	21.2	23.9	40.4	62.3	123.8	139.6	140.2	116.3	116.3	91.7	73.9
87.5°	0.0	0.7	0.7	0.7	6.2	17.1	14.4	4.1	2.1	2.1	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



TEST NUMBER: P151791

CATALOG NUMBER: TLM-E02-LED-E1-SL4-HSS-7050

**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4
2.5°	363.9	361.9	353.7	345.5	337.9	329.7	322.2	314.7	306.5	300.3	292.8
5°	425.5	410.4	393.3	376.9	360.5	343.4	325.6	309.9	293.5	278.4	264.1
7.5°	487.7	458.3	435.1	405.7	379.0	352.3	327.7	302.4	279.1	257.2	236.7
10°	540.4	504.8	468.6	431.0	392.7	357.1	322.9	292.8	262.0	235.3	210.0
12.5°	583.5	538.4	493.9	446.7	403.6	358.5	316.0	279.8	243.5	213.4	187.4
15°	622.5	570.5	517.2	462.4	407.7	356.4	309.2	264.1	227.1	192.9	163.5
17.5°	654.0	594.5	534.3	472.7	413.9	353.7	300.3	253.1	210.0	174.4	145.7
20°	681.3	619.1	554.1	485.0	418.0	353.0	292.8	239.4	195.0	157.3	129.3
22.5°	706.6	644.4	574.6	500.7	424.1	352.3	285.9	229.2	182.0	144.3	116.3
25°	735.4	669.7	596.5	517.2	435.1	355.0	281.8	221.0	170.3	132.0	106.0
27.5°	767.5	698.4	622.5	537.7	449.4	360.5	280.5	212.1	160.1	120.4	97.8
30°	812.7	732.6	648.5	558.2	462.4	366.7	279.1	206.6	149.8	111.5	89.6
32.5°	852.4	766.2	677.2	579.4	476.8	372.8	278.4	199.1	140.2	102.6	83.5
35°	894.1	796.9	701.9	599.9	489.1	379.7	277.7	193.6	131.3	93.7	77.3
37.5°	930.3	822.9	721.0	617.7	502.8	385.8	278.4	188.8	123.1	86.2	71.8
40°	961.1	849.6	742.2	634.1	517.2	395.4	279.1	184.0	114.9	79.4	67.0
42.5°	988.5	874.9	764.8	652.6	533.6	406.3	283.2	179.9	108.1	73.2	62.3
45°	1009.7	898.2	789.4	678.6	560.3	424.1	290.7	177.2	101.2	67.7	58.1
47.5°	1031.6	932.4	831.1	719.6	599.2	452.2	303.7	176.5	95.8	63.6	54.7
50°	1061.7	966.6	868.1	761.4	634.8	480.9	319.5	177.2	88.9	59.5	51.3
52.5°	1083.6	1001.5	916.0	833.9	719.6	568.5	380.3	189.5	85.5	56.1	47.2
55°	1212.9	1198.5	1200.5	1214.2	1126.0	967.3	636.2	273.6	100.6	63.6	46.5
57.5°	1710.2	1760.8	1790.2	1789.5	1643.8	1363.4	854.4	351.6	112.2	73.9	55.4
60°	2364.1	2325.8	2271.8	2138.4	1944.8	1556.3	955.6	378.3	97.1	58.8	50.6
62.5°	2942.2	2717.8	2518.7	2302.6	2048.8	1623.3	976.2	376.2	84.8	44.5	35.6
65°	3302.7	2899.1	2577.6	2306.7	2007.7	1567.2	923.5	345.5	71.8	36.3	29.4
67.5°	3388.9	2801.3	2346.4	2000.9	1677.3	1219.7	677.9	259.9	56.1	30.1	26.0
69°	3200.8	2490.0	1944.1	1552.2	1220.4	809.3	419.3	164.2	43.1	27.4	23.9
70°	2944.2	2165.8	1583.6	1245.7	903.7	568.5	293.5	115.6	34.9	25.3	21.9
72.5°	1894.2	1137.6	778.5	541.8	372.8	226.4	114.9	52.0	26.7	21.2	17.8
75°	734.7	420.7	305.1	231.9	181.3	125.9	69.8	33.5	22.6	17.8	13.7
77.5°	361.9	277.0	226.4	155.3	90.3	56.1	37.6	26.0	18.5	13.0	8.9
80°	285.9	190.2	113.6	70.5	53.4	40.4	28.7	21.2	13.7	8.2	6.2
82.5°	146.4	80.0	58.8	47.9	39.7	31.5	23.3	15.0	8.9	5.5	4.8
85°	45.8	33.5	30.1	29.4	27.4	22.6	16.4	9.6	5.5	3.4	3.4
87.5°	3.4	4.8	6.2	4.8	5.5	4.8	6.2	4.1	2.7	2.7	2.1
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: P151791

CATALOG NUMBER: TLM-E02-LED-E1-SL4-HSS-7050

**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4	315.4
2.5°	287.3	279.1	271.6	266.8	257.9	254.5	251.1	249.7	243.5	244.9	239.4
5°	251.1	236.7	225.7	214.8	204.5	197.0	190.9	183.3	177.2	174.4	169.0
7.5°	218.2	199.7	185.4	173.8	161.4	151.9	143.7	138.2	132.7	127.2	124.5
10°	189.5	169.6	153.2	141.6	130.0	121.8	115.6	111.5	108.1	106.0	105.3
12.5°	162.8	143.7	128.6	118.3	109.5	105.3	102.6	100.6	99.9	99.2	99.2
15°	142.3	123.1	111.5	104.0	99.9	97.8	97.1	95.8	94.4	93.7	93.7
17.5°	123.1	108.8	100.6	96.5	94.4	93.0	91.7	90.3	88.9	88.2	88.2
20°	110.1	98.5	94.4	91.7	89.6	88.2	86.2	84.8	84.1	83.5	82.8
22.5°	99.9	92.3	89.6	87.6	84.8	82.8	81.4	80.0	78.7	78.0	77.3
25°	92.3	87.6	85.5	82.8	80.0	78.0	75.9	73.9	72.5	71.8	70.5
27.5°	86.9	83.5	80.7	77.3	74.6	72.5	70.5	68.4	67.0	65.7	65.0
30°	82.1	78.7	75.2	72.5	69.1	67.0	64.3	62.3	61.6	60.2	58.8
32.5°	77.3	73.9	70.5	67.0	63.6	60.9	59.5	56.8	55.4	54.7	53.4
35°	71.8	68.4	64.3	61.6	58.1	55.4	53.4	51.3	49.9	48.6	47.9
37.5°	67.0	62.9	58.8	55.4	52.7	49.9	47.9	45.8	44.5	43.1	42.4
40°	61.6	57.5	53.4	49.9	47.2	45.1	43.1	41.0	39.7	39.0	39.0
42.5°	56.8	52.0	47.9	45.1	43.1	40.4	38.3	36.3	35.6	34.9	35.6
45°	52.0	47.2	43.8	41.0	39.0	36.3	34.2	32.8	32.2	32.8	33.5
47.5°	47.9	43.1	39.7	37.6	35.6	33.5	31.5	30.1	30.1	31.5	32.8
50°	43.8	39.0	36.3	34.9	32.8	30.8	28.0	27.4	28.0	29.4	30.8
52.5°	39.7	34.2	32.2	31.5	29.4	27.4	25.3	24.6	25.3	26.7	26.0
55°	35.6	30.1	29.4	28.7	26.7	23.9	21.9	21.9	21.9	21.2	19.8
57.5°	34.2	26.7	26.0	25.3	23.3	20.5	19.2	17.8	17.1	15.0	14.4
60°	35.6	23.9	23.9	22.6	20.5	17.8	15.7	13.7	12.3	10.9	10.9
62.5°	28.7	21.9	21.2	19.8	17.1	14.4	12.3	10.3	9.6	8.9	8.9
65°	23.3	19.8	18.5	16.4	14.4	11.6	9.6	8.2	7.5	7.5	8.2
67.5°	21.2	17.8	15.7	13.7	11.6	8.9	7.5	6.8	6.8	7.5	7.5
69°	19.8	16.4	14.4	12.3	10.3	8.2	6.8	6.8	6.8	6.8	7.5
70°	18.5	15.7	13.7	11.6	8.9	6.8	6.2	6.2	6.8	6.8	7.5
72.5°	14.4	12.3	11.6	9.6	6.8	6.2	5.5	6.2	6.2	6.8	6.8
75°	10.9	8.9	8.9	7.5	5.5	4.8	4.8	5.5	5.5	6.2	6.2
77.5°	7.5	6.2	6.2	5.5	4.8	4.1	4.1	4.8	5.5	5.5	6.2
80°	5.5	4.8	4.1	4.8	4.1	3.4	4.1	4.8	4.8	5.5	5.5
82.5°	4.1	4.1	4.1	4.1	3.4	3.4	4.1	4.1	4.8	5.5	5.5
85°	3.4	3.4	3.4	3.4	3.4	3.4	3.4	4.1	4.1	4.8	4.8
87.5°	2.1	2.1	2.1	2.7	2.7	3.4	3.4	3.4	3.4	4.1	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





TEST NUMBER: P151791

CATALOG NUMBER: TLM-E02-LED-E1-SL4-HSS-7050

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	315.4	315.4	315.4	315.4
2.5°	238.1	237.4	234.6	235.3
5°	166.9	162.8	165.5	164.9
7.5°	122.4	121.8	121.1	122.4
10°	104.7	104.7	104.0	104.7
12.5°	98.5	98.5	98.5	98.5
15°	93.7	93.7	93.0	93.0
17.5°	88.2	88.2	88.2	87.6
20°	82.8	82.1	82.1	82.1
22.5°	76.6	75.9	75.9	75.9
25°	70.5	69.8	69.8	69.8
27.5°	64.3	63.6	62.9	62.9
30°	58.1	57.5	56.8	56.8
32.5°	52.0	51.3	50.6	50.6
35°	46.5	46.5	45.8	45.1
37.5°	41.7	41.7	41.7	41.7
40°	38.3	39.0	39.0	39.0
42.5°	36.3	36.9	37.6	38.3
45°	34.9	36.3	36.9	36.9
47.5°	34.2	34.9	35.6	35.6
50°	31.5	30.8	30.8	30.8
52.5°	25.3	23.9	23.3	22.6
55°	18.5	17.8	16.4	16.4
57.5°	13.0	13.0	12.3	12.3
60°	10.3	10.3	9.6	10.3
62.5°	8.9	8.9	8.9	8.9
65°	8.2	8.2	8.2	8.2
67.5°	8.2	8.2	8.2	8.2
69°	7.5	7.5	7.5	7.5
70°	7.5	7.5	7.5	7.5
72.5°	6.8	6.8	6.8	6.8
75°	6.2	6.8	6.8	6.8
77.5°	6.2	6.2	6.2	6.2
80°	5.5	5.5	6.2	6.2
82.5°	5.5	5.5	5.5	5.5
85°	4.8	4.8	5.5	5.5
87.5°	4.1	4.1	4.8	4.8
90°	0.0	0.0	0.0	0.0

(END OF REPORT)