

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: P151790

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

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P151790  
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  
Description: TALON MEDIUM LED SITE LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 4 W/ SPILL LIGHT CONTROL AND  
HOUSE SIDE SHIELD  
Light Source: (42) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

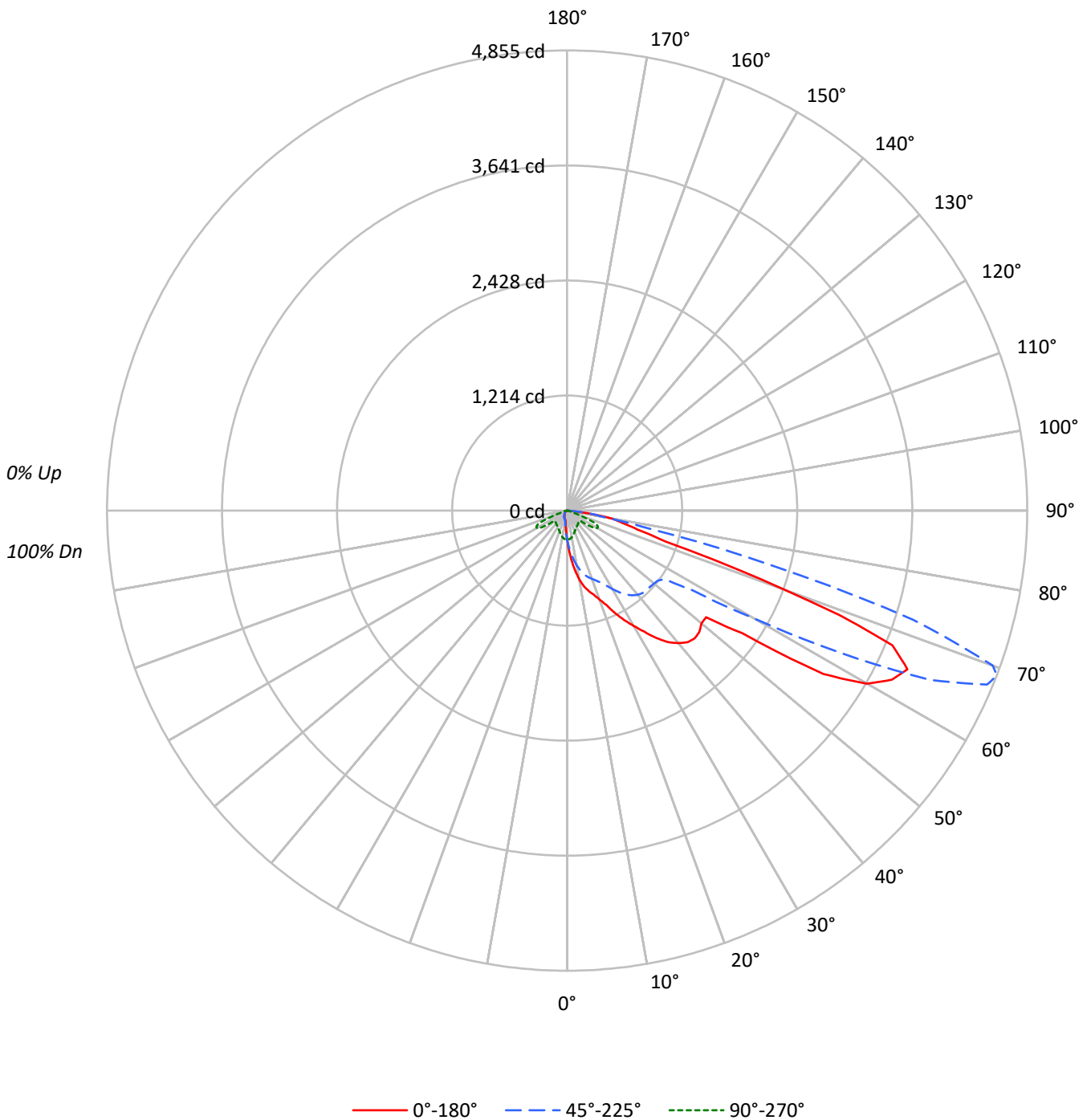
Lumens per Lamp: N/A  
Luminaire Lumens: 4069.6 lumens  
Efficiency: N/A  
Efficacy: 78.1 lumens/watt  
Spacing Criteria (0/90/45): 4.24 / 0.98 / 4.1  
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')  
CIE Type: Direct

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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### 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°	10023	10023	10023
5°	17134	9888	5262
10°	24400	9449	3378
15°	29672	8689	3063
20°	34618	8098	2777
25°	42853	7749	2447
30°	52880	7582	2083
35°	65355	7514	1752
40°	77750	7635	1618
45°	87889	7966	1661
50°	93913	8764	1522
55°	128333	15167	910
60°	238287	24052	652
65°	305735	25987	617
70°	230858	10748	696
75°	96120	4121	844
80°	87777	3888	1127
85°	7747	3481	1984



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.6	0.8
10°-20°	108.9	2.7
20°-30°	208.5	5.1
30°-40°	346.7	8.5
40°-50°	469.1	11.5
50°-60°	733.6	18.0
60°-70°	1508.3	37.1
70°-80°	606.9	14.9
80°-90°	56.1	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°	349.0	8.6
0°-40°	695.6	17.1
0°-60°	1898.3	46.6
0°-90°	4069.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4069.6	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	307	307	307	307	307	
5°	523	445	302	192	161	56
15°	879	697	257	95	91	251
25°	1191	839	215	76	68	558
35°	1641	1083	189	54	44	1029
45°	1905	1185	173	35	36	1456
55°	2257	1260	267	23	16	2275
65°	3961	4224	337	11	8	3629
75°	763	2224	33	5	7	1022
85°	21	89	9	3	5	128
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°	307.3	307.3	307.3	307.3	307.3	307.3	307.3	307.3	307.3	307.3	307.3
2.5°	410.0	405.3	400.0	400.0	393.3	393.3	389.3	378.7	377.3	371.3	365.3
5°	523.3	519.3	512.7	506.7	501.3	492.0	485.3	472.7	458.7	445.3	433.3
7.5°	634.0	632.0	620.0	618.0	609.3	594.0	580.7	562.0	538.0	519.3	497.3
10°	736.7	732.0	729.3	718.0	705.3	688.7	668.0	645.3	617.3	588.0	556.7
12.5°	818.0	815.3	803.3	798.7	785.3	768.7	742.7	713.3	685.3	647.3	610.7
15°	878.7	874.0	866.0	858.7	842.7	828.0	804.0	772.0	738.0	696.7	652.7
17.5°	929.3	920.7	918.7	907.3	890.7	873.3	846.7	817.3	777.3	736.0	688.0
20°	997.3	985.3	981.3	964.7	945.3	921.3	890.7	854.0	812.0	766.7	717.3
22.5°	1077.3	1068.7	1060.0	1045.3	1020.7	986.7	942.0	902.0	848.7	798.7	745.3
25°	1190.7	1183.3	1169.3	1149.3	1118.7	1078.0	1024.0	965.3	902.7	838.7	776.0
27.5°	1300.7	1294.0	1284.0	1268.7	1234.0	1189.3	1122.7	1048.0	968.7	891.3	822.0
30°	1404.0	1398.0	1388.0	1372.7	1342.0	1298.0	1222.7	1142.7	1044.0	954.0	870.7
32.5°	1515.3	1513.3	1502.0	1480.0	1453.3	1394.0	1312.0	1226.0	1126.0	1022.0	924.7
35°	1641.3	1626.0	1615.3	1593.3	1548.0	1484.7	1388.7	1294.7	1189.3	1082.7	974.0
37.5°	1748.0	1733.3	1720.0	1692.0	1636.7	1556.0	1447.3	1344.0	1235.3	1126.7	1016.0
40°	1826.0	1818.7	1802.7	1766.0	1704.0	1608.0	1490.7	1378.0	1268.7	1159.3	1050.0
42.5°	1884.0	1872.7	1854.7	1816.7	1743.3	1634.0	1508.0	1392.0	1284.0	1179.3	1072.0
45°	1905.3	1896.0	1879.3	1838.0	1758.7	1641.3	1507.3	1388.0	1284.7	1185.3	1086.7
47.5°	1892.7	1883.3	1868.7	1830.0	1752.0	1632.7	1495.3	1376.7	1278.0	1187.3	1100.0
50°	1850.7	1845.3	1834.0	1801.3	1731.3	1616.0	1484.7	1370.7	1276.7	1197.3	1118.7
52.5°	1846.7	1843.3	1829.3	1796.7	1725.3	1610.7	1483.3	1374.0	1288.0	1210.0	1132.0
55°	2256.7	2209.3	2103.3	2013.3	1865.3	1689.3	1550.7	1428.0	1336.0	1260.0	1205.3
57.5°	3207.3	3136.7	2997.3	2826.0	2486.0	2152.0	1884.7	1691.3	1596.0	1561.3	1582.0
60°	3652.7	3640.0	3618.0	3536.7	3362.7	3075.3	2755.3	2409.3	2270.7	2258.7	2300.7
62.5°	3864.0	3856.0	3862.7	3852.7	3798.7	3714.7	3622.7	3473.3	3336.0	3247.3	3059.3
65°	3961.3	3966.7	4004.7	4034.7	4041.3	4063.3	4130.7	4316.7	4452.7	4224.0	3702.0
67.5°	3714.0	3745.3	3832.7	3942.0	4070.0	4194.0	4394.0	4786.0	5065.3	4796.7	4055.3
69°	3074.7	3090.0	3303.3	3509.3	3822.0	4040.7	4330.7	4844.7	5158.7	4855.3	4027.3
70°	2420.7	2434.7	2663.3	2943.3	3472.0	3753.3	4132.7	4745.3	5071.3	4777.3	3883.3
72.5°	1092.0	1072.0	1152.7	1302.7	1877.3	2324.0	2987.3	3844.7	4184.0	3827.3	2905.3
75°	762.7	754.0	762.7	763.3	852.7	1100.0	1388.0	2084.0	2577.3	2224.0	1388.0
77.5°	590.7	584.7	578.7	572.0	582.7	652.7	680.7	739.3	960.0	908.0	529.3
80°	467.3	462.0	476.7	472.0	472.0	480.0	474.7	452.7	411.3	381.3	341.3
82.5°	217.3	218.7	218.7	237.3	286.0	334.0	349.3	327.3	290.7	247.3	199.3
85°	20.7	23.3	39.3	60.7	120.7	136.0	136.7	113.3	113.3	89.3	72.0
87.5°	0.0	0.7	0.7	0.7	6.0	16.7	14.0	4.0	2.0	2.0	3.3
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°	307.3	307.3	307.3	307.3	307.3	307.3	307.3	307.3	307.3	307.3	307.3
2.5°	354.7	352.7	344.7	336.7	329.3	321.3	314.0	306.7	298.7	292.7	285.3
5°	414.7	400.0	383.3	367.3	351.3	334.7	317.3	302.0	286.0	271.3	257.3
7.5°	475.3	446.7	424.0	395.3	369.3	343.3	319.3	294.7	272.0	250.7	230.7
10°	526.7	492.0	456.7	420.0	382.7	348.0	314.7	285.3	255.3	229.3	204.7
12.5°	568.7	524.7	481.3	435.3	393.3	349.3	308.0	272.7	237.3	208.0	182.7
15°	606.7	556.0	504.0	450.7	397.3	347.3	301.3	257.3	221.3	188.0	159.3
17.5°	637.3	579.3	520.7	460.7	403.3	344.7	292.7	246.7	204.7	170.0	142.0
20°	664.0	603.3	540.0	472.7	407.3	344.0	285.3	233.3	190.0	153.3	126.0
22.5°	688.7	628.0	560.0	488.0	413.3	343.3	278.7	223.3	177.3	140.7	113.3
25°	716.7	652.7	581.3	504.0	424.0	346.0	274.7	215.3	166.0	128.7	103.3
27.5°	748.0	680.7	606.7	524.0	438.0	351.3	273.3	206.7	156.0	117.3	95.3
30°	792.0	714.0	632.0	544.0	450.7	357.3	272.0	201.3	146.0	108.7	87.3
32.5°	830.7	746.7	660.0	564.7	464.7	363.3	271.3	194.0	136.7	100.0	81.3
35°	871.3	776.7	684.0	584.7	476.7	370.0	270.7	188.7	128.0	91.3	75.3
37.5°	906.7	802.0	702.7	602.0	490.0	376.0	271.3	184.0	120.0	84.0	70.0
40°	936.7	828.0	723.3	618.0	504.0	385.3	272.0	179.3	112.0	77.3	65.3
42.5°	963.3	852.7	745.3	636.0	520.0	396.0	276.0	175.3	105.3	71.3	60.7
45°	984.0	875.3	769.3	661.3	546.0	413.3	283.3	172.7	98.7	66.0	56.7
47.5°	1005.3	908.7	810.0	701.3	584.0	440.7	296.0	172.0	93.3	62.0	53.3
50°	1034.7	942.0	846.0	742.0	618.7	468.7	311.3	172.7	86.7	58.0	50.0
52.5°	1056.0	976.0	892.7	812.7	701.3	554.0	370.7	184.7	83.3	54.7	46.0
55°	1182.0	1168.0	1170.0	1183.3	1097.3	942.7	620.0	266.7	98.0	62.0	45.3
57.5°	1666.7	1716.0	1744.7	1744.0	1602.0	1328.7	832.7	342.7	109.3	72.0	54.0
60°	2304.0	2266.7	2214.0	2084.0	1895.3	1516.7	931.3	368.7	94.7	57.3	49.3
62.5°	2867.3	2648.7	2454.7	2244.0	1996.7	1582.0	951.3	366.7	82.7	43.3	34.7
65°	3218.7	2825.3	2512.0	2248.0	1956.7	1527.3	900.0	336.7	70.0	35.3	28.7
67.5°	3302.7	2730.0	2286.7	1950.0	1634.7	1188.7	660.7	253.3	54.7	29.3	25.3
69°	3119.3	2426.7	1894.7	1512.7	1189.3	788.7	408.7	160.0	42.0	26.7	23.3
70°	2869.3	2110.7	1543.3	1214.0	880.7	554.0	286.0	112.7	34.0	24.7	21.3
72.5°	1846.0	1108.7	758.7	528.0	363.3	220.7	112.0	50.7	26.0	20.7	17.3
75°	716.0	410.0	297.3	226.0	176.7	122.7	68.0	32.7	22.0	17.3	13.3
77.5°	352.7	270.0	220.7	151.3	88.0	54.7	36.7	25.3	18.0	12.7	8.7
80°	278.7	185.3	110.7	68.7	52.0	39.3	28.0	20.7	13.3	8.0	6.0
82.5°	142.7	78.0	57.3	46.7	38.7	30.7	22.7	14.7	8.7	5.3	4.7
85°	44.7	32.7	29.3	28.7	26.7	22.0	16.0	9.3	5.3	3.3	3.3
87.5°	3.3	4.7	6.0	4.7	5.3	4.7	6.0	4.0	2.7	2.7	2.0
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):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	307.3	307.3	307.3	307.3	307.3	307.3	307.3	307.3	307.3	307.3	307.3
2.5°	280.0	272.0	264.7	260.0	251.3	248.0	244.7	243.3	237.3	238.7	233.3
5°	244.7	230.7	220.0	209.3	199.3	192.0	186.0	178.7	172.7	170.0	164.7
7.5°	212.7	194.7	180.7	169.3	157.3	148.0	140.0	134.7	129.3	124.0	121.3
10°	184.7	165.3	149.3	138.0	126.7	118.7	112.7	108.7	105.3	103.3	102.7
12.5°	158.7	140.0	125.3	115.3	106.7	102.7	100.0	98.0	97.3	96.7	96.7
15°	138.7	120.0	108.7	101.3	97.3	95.3	94.7	93.3	92.0	91.3	91.3
17.5°	120.0	106.0	98.0	94.0	92.0	90.7	89.3	88.0	86.7	86.0	86.0
20°	107.3	96.0	92.0	89.3	87.3	86.0	84.0	82.7	82.0	81.3	80.7
22.5°	97.3	90.0	87.3	85.3	82.7	80.7	79.3	78.0	76.7	76.0	75.3
25°	90.0	85.3	83.3	80.7	78.0	76.0	74.0	72.0	70.7	70.0	68.7
27.5°	84.7	81.3	78.7	75.3	72.7	70.7	68.7	66.7	65.3	64.0	63.3
30°	80.0	76.7	73.3	70.7	67.3	65.3	62.7	60.7	60.0	58.7	57.3
32.5°	75.3	72.0	68.7	65.3	62.0	59.3	58.0	55.3	54.0	53.3	52.0
35°	70.0	66.7	62.7	60.0	56.7	54.0	52.0	50.0	48.7	47.3	46.7
37.5°	65.3	61.3	57.3	54.0	51.3	48.7	46.7	44.7	43.3	42.0	41.3
40°	60.0	56.0	52.0	48.7	46.0	44.0	42.0	40.0	38.7	38.0	38.0
42.5°	55.3	50.7	46.7	44.0	42.0	39.3	37.3	35.3	34.7	34.0	34.7
45°	50.7	46.0	42.7	40.0	38.0	35.3	33.3	32.0	31.3	32.0	32.7
47.5°	46.7	42.0	38.7	36.7	34.7	32.7	30.7	29.3	29.3	30.7	32.0
50°	42.7	38.0	35.3	34.0	32.0	30.0	27.3	26.7	27.3	28.7	30.0
52.5°	38.7	33.3	31.3	30.7	28.7	26.7	24.7	24.0	24.7	26.0	25.3
55°	34.7	29.3	28.7	28.0	26.0	23.3	21.3	21.3	21.3	20.7	19.3
57.5°	33.3	26.0	25.3	24.7	22.7	20.0	18.7	17.3	16.7	14.7	14.0
60°	34.7	23.3	23.3	22.0	20.0	17.3	15.3	13.3	12.0	10.7	10.7
62.5°	28.0	21.3	20.7	19.3	16.7	14.0	12.0	10.0	9.3	8.7	8.7
65°	22.7	19.3	18.0	16.0	14.0	11.3	9.3	8.0	7.3	7.3	8.0
67.5°	20.7	17.3	15.3	13.3	11.3	8.7	7.3	6.7	6.7	7.3	7.3
69°	19.3	16.0	14.0	12.0	10.0	8.0	6.7	6.7	6.7	6.7	7.3
70°	18.0	15.3	13.3	11.3	8.7	6.7	6.0	6.0	6.7	6.7	7.3
72.5°	14.0	12.0	11.3	9.3	6.7	6.0	5.3	6.0	6.0	6.7	6.7
75°	10.7	8.7	8.7	7.3	5.3	4.7	4.7	5.3	5.3	6.0	6.0
77.5°	7.3	6.0	6.0	5.3	4.7	4.0	4.0	4.7	5.3	5.3	6.0
80°	5.3	4.7	4.0	4.7	4.0	3.3	4.0	4.7	4.7	5.3	5.3
82.5°	4.0	4.0	4.0	4.0	3.3	3.3	4.0	4.0	4.7	5.3	5.3
85°	3.3	3.3	3.3	3.3	3.3	3.3	3.3	4.0	4.0	4.7	4.7
87.5°	2.0	2.0	2.0	2.7	2.7	3.3	3.3	3.3	3.3	4.0	4.0
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: P151790

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

**CANDELA DISTRIBUTION (continued):**

	165°	170°	175°	180°
0°	307.3	307.3	307.3	307.3
2.5°	232.0	231.3	228.7	229.3
5°	162.7	158.7	161.3	160.7
7.5°	119.3	118.7	118.0	119.3
10°	102.0	102.0	101.3	102.0
12.5°	96.0	96.0	96.0	96.0
15°	91.3	91.3	90.7	90.7
17.5°	86.0	86.0	86.0	85.3
20°	80.7	80.0	80.0	80.0
22.5°	74.7	74.0	74.0	74.0
25°	68.7	68.0	68.0	68.0
27.5°	62.7	62.0	61.3	61.3
30°	56.7	56.0	55.3	55.3
32.5°	50.7	50.0	49.3	49.3
35°	45.3	45.3	44.7	44.0
37.5°	40.7	40.7	40.7	40.7
40°	37.3	38.0	38.0	38.0
42.5°	35.3	36.0	36.7	37.3
45°	34.0	35.3	36.0	36.0
47.5°	33.3	34.0	34.7	34.7
50°	30.7	30.0	30.0	30.0
52.5°	24.7	23.3	22.7	22.0
55°	18.0	17.3	16.0	16.0
57.5°	12.7	12.7	12.0	12.0
60°	10.0	10.0	9.3	10.0
62.5°	8.7	8.7	8.7	8.7
65°	8.0	8.0	8.0	8.0
67.5°	8.0	8.0	8.0	8.0
69°	7.3	7.3	7.3	7.3
70°	7.3	7.3	7.3	7.3
72.5°	6.7	6.7	6.7	6.7
75°	6.0	6.7	6.7	6.7
77.5°	6.0	6.0	6.0	6.0
80°	5.3	5.3	6.0	6.0
82.5°	5.3	5.3	5.3	5.3
85°	4.7	4.7	5.3	5.3
87.5°	4.0	4.0	4.7	4.7
90°	0.0	0.0	0.0	0.0

(END OF REPORT)