

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: P150656

Luminaire Tested: **TLM-F02-LED-E1-SL3-HSS-7050**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P150656  
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-F02-LED-E1-SL3-HSS-7050  
Description: TALON MEDIUM LED SITE LUMINAIRE  
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND  
HOUSE SIDE SHIELD  
Light Source: (14) 5000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2937.3 lumens  
Efficiency: N/A  
Efficacy: 53.4 lumens/watt  
Spacing Criteria (0/90/45): 4.23 / 3.52 / 4.33  
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')  
CIE Type: Direct

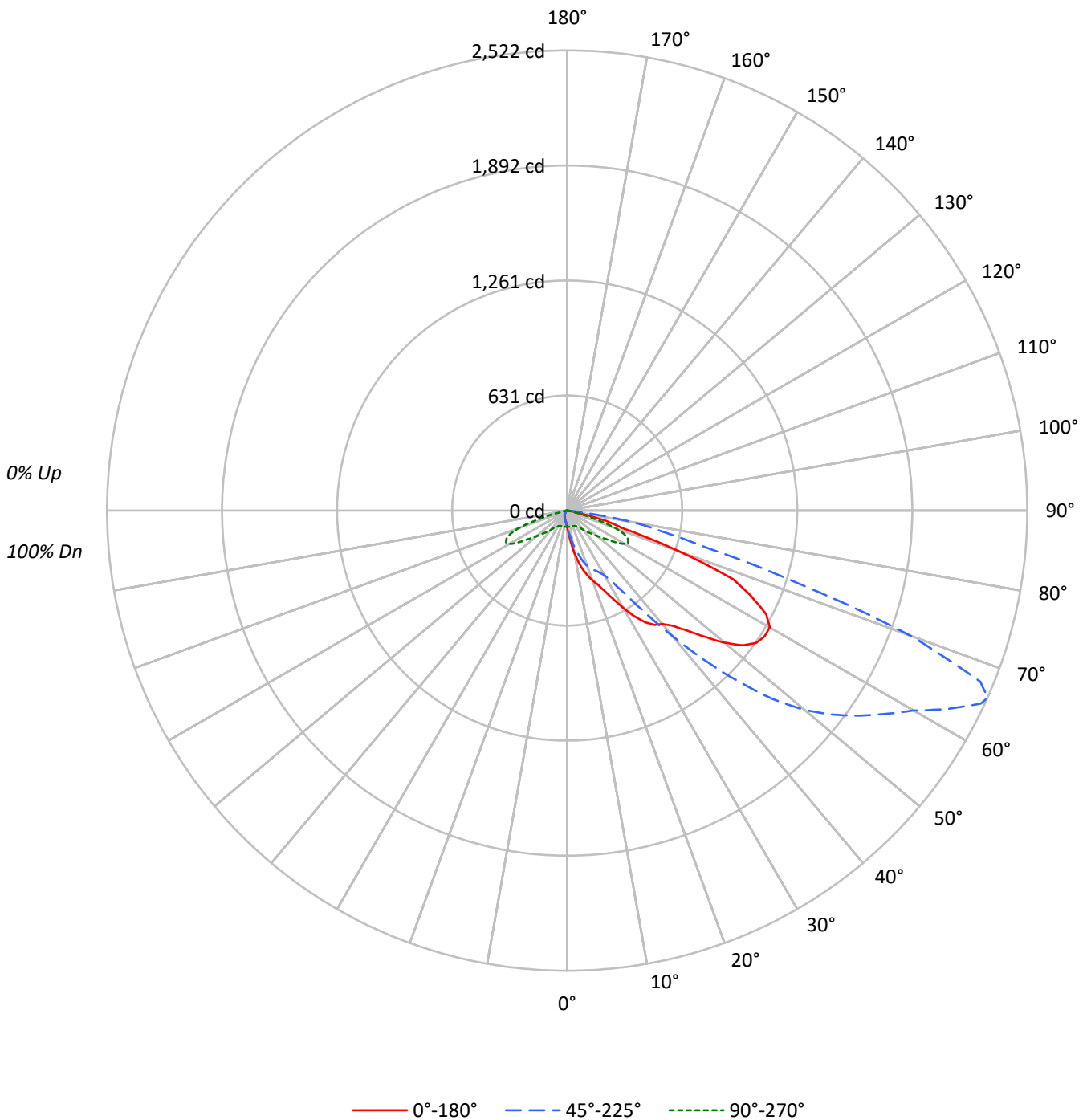
Input Watts (W): 55  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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CATALOG NUMBER: TLM-F02-LED-E1-SL3-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	98	93	87	102	96	91	86	92	87	83	88	84	81	84	81	78	76
2	91	80	71	63	88	78	69	62	74	67	61	71	64	59	67	62	58	55
3	80	66	55	46	77	64	54	46	61	52	45	58	50	44	55	48	43	40
4	71	55	43	35	68	53	43	34	51	41	34	48	40	33	45	38	32	30
5	63	47	35	27	61	45	34	26	43	33	26	41	32	26	39	31	25	23
6	57	40	29	21	55	39	29	21	37	28	21	35	27	20	33	26	20	17
7	52	35	24	17	50	34	24	17	33	23	17	31	23	16	29	22	16	14
8	48	31	21	14	46	30	21	14	29	20	14	28	19	13	26	19	13	11
9	44	28	18	12	42	27	18	12	26	17	11	25	17	11	24	16	11	9
10	41	25	16	10	39	25	16	10	24	15	10	23	15	10	22	15	10	7

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	2893	2893	2893
5°	4846	2912	2125
10°	7949	2938	1775
15°	11346	3061	1506
20°	14114	3166	1295
25°	17459	3354	1098
30°	23205	3755	934
35°	29773	4440	788
40°	34528	5844	626
45°	42877	7895	471
50°	57113	11004	457
55°	71938	16091	512
60°	83665	23870	555
65°	85995	28348	610
70°	62848	27223	696
75°	28331	11853	920
80°	5090	2968	1371
85°	412	2638	2545



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	9.9	0.3
10°-20°	42.1	1.4
20°-30°	90.8	3.1
30°-40°	193.8	6.6
40°-50°	428.7	14.6
50°-60°	726.5	24.7
60°-70°	969.4	33.0
70°-80°	427.0	14.5
80°-90°	49.2	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°	142.8	4.9
0°-40°	336.6	11.5
0°-60°	1491.7	50.8
0°-90°	2937.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2937.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	89	89	89	89	89	
5°	148	125	89	67	65	17
15°	336	256	91	48	45	96
25°	485	362	93	35	30	232
35°	748	560	112	24	20	464
45°	930	1319	171	14	10	735
55°	1265	1960	283	7	9	1115
65°	1114	2502	367	5	8	1064
75°	225	801	94	4	7	248
85°	1	17	7	3	7	7
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°	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7
2.5°	111.8	111.2	109.0	109.0	105.6	103.3	100.5	97.7	97.7	97.1	96.6
5°	148.0	144.6	144.0	137.8	132.7	125.4	118.6	109.6	108.4	107.3	106.7
7.5°	188.1	187.5	182.4	175.1	164.9	151.3	137.8	123.1	120.8	119.7	117.5
10°	240.0	237.2	230.4	218.0	202.7	184.7	162.6	139.5	136.7	134.4	133.3
12.5°	289.7	284.6	280.7	264.9	245.7	219.1	192.6	159.3	157.0	154.2	149.7
15°	336.0	331.5	324.7	311.2	289.7	256.4	225.3	184.7	179.0	175.1	171.7
17.5°	372.1	369.3	361.4	346.2	323.0	293.7	256.4	210.6	206.1	201.0	194.8
20°	406.6	402.6	390.2	369.3	344.5	321.9	293.1	244.5	238.3	232.1	225.3
22.5°	439.3	435.4	415.1	380.6	354.1	344.5	334.3	282.9	273.3	268.2	261.5
25°	485.1	476.6	445.0	390.2	354.6	362.0	379.5	332.6	323.6	316.2	305.5
27.5°	546.6	535.4	485.7	404.3	356.9	381.2	431.4	393.0	383.4	375.0	363.1
30°	616.1	608.8	549.5	438.2	373.3	409.4	489.6	469.8	458.6	448.4	434.3
32.5°	686.1	676.0	617.2	502.6	417.3	464.2	562.5	559.1	544.4	534.8	519.5
35°	747.7	742.6	699.1	608.2	517.8	560.2	659.6	663.5	650.6	640.4	623.4
37.5°	789.5	789.5	781.0	721.7	677.7	709.3	802.5	803.0	790.0	766.9	758.4
40°	810.9	817.1	847.6	858.9	856.7	897.3	989.9	979.8	969.1	957.2	929.0
42.5°	855.0	860.6	925.6	1003.5	1054.3	1108.0	1171.8	1168.4	1155.4	1134.0	1108.0
45°	929.5	936.9	1014.2	1137.9	1242.4	1318.6	1359.3	1343.5	1330.5	1310.1	1296.6
47.5°	1024.4	1038.5	1126.0	1279.1	1405.0	1530.9	1573.3	1531.5	1520.2	1504.4	1482.4
50°	1125.5	1139.0	1232.2	1407.3	1549.6	1699.8	1770.4	1699.8	1683.4	1678.3	1653.5
52.5°	1213.0	1224.3	1314.1	1506.1	1660.3	1836.5	1939.2	1846.1	1834.2	1817.3	1799.2
55°	1265.0	1274.0	1358.1	1553.5	1735.4	1959.6	2102.4	2020.6	2003.1	1996.3	1970.3
57.5°	1282.5	1291.5	1367.2	1559.7	1776.0	2071.9	2300.7	2303.5	2282.6	2258.3	2250.4
60°	1282.5	1292.6	1356.5	1544.5	1815.6	2191.7	2564.9	2800.4	2755.3	2750.7	2721.9
62.5°	1229.4	1239.0	1303.4	1497.6	1868.6	2353.2	2933.1	3348.8	3335.8	3306.4	3259.0
65°	1114.2	1119.8	1183.1	1377.9	1848.3	2501.7	3252.2	3713.6	3692.7	3635.1	3574.1
66°	1062.2	1066.8	1126.0	1309.6	1781.7	2522.0	3308.7	3759.3	3724.9	3676.3	3607.4
67.5°	987.1	995.0	1036.8	1182.5	1621.9	2451.4	3273.1	3727.1	3697.2	3638.5	3569.6
70°	659.0	653.4	800.8	907.5	1235.6	1997.4	2936.5	3346.5	3347.1	3319.4	3291.7
72.5°	312.9	316.2	359.2	558.5	808.7	1334.4	2337.4	2671.1	2709.5	2659.8	2625.4
75°	224.8	229.8	255.8	341.7	482.3	800.8	1515.1	1868.1	1869.2	1781.1	1702.6
77.5°	65.5	68.3	96.0	210.6	361.4	540.4	870.2	1038.5	1014.2	951.0	891.7
80°	27.1	27.1	28.2	67.2	145.1	367.1	608.8	799.6	796.8	772.5	737.5
82.5°	10.2	10.7	13.6	27.7	34.4	90.4	406.0	694.0	692.3	657.9	633.0
85°	1.1	1.1	3.4	11.9	13.0	16.9	81.3	306.1	304.4	306.1	268.2
87.5°	0.0	0.0	0.6	1.1	1.7	2.3	3.4	11.9	13.0	12.4	11.3
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):**

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7
2.5°	96.6	95.4	95.4	94.9	94.9	94.9	94.3	93.7	93.7	93.2	92.6
5°	105.6	104.5	103.9	102.8	102.2	101.6	100.5	100.0	98.8	98.3	97.7
7.5°	116.3	114.1	113.5	111.8	110.1	109.0	107.9	106.2	105.0	102.8	102.2
10°	129.9	127.1	124.8	122.5	120.8	118.0	116.3	114.1	111.8	110.1	108.4
12.5°	147.4	143.4	140.0	137.8	133.8	130.4	127.1	125.4	120.8	118.6	115.8
15°	166.6	162.1	158.1	153.6	150.8	145.1	140.6	135.5	133.3	129.3	124.8
17.5°	191.4	184.1	177.9	173.4	167.7	162.1	157.0	151.9	145.1	140.6	135.0
20°	218.0	211.8	203.3	195.4	188.6	181.8	174.5	167.7	161.5	154.2	147.4
22.5°	251.9	242.8	232.7	224.8	215.7	208.4	198.2	189.2	179.0	169.4	161.5
25°	294.8	282.9	273.3	262.0	251.3	240.0	227.6	216.3	203.3	194.3	180.7
27.5°	347.9	336.6	323.6	308.9	298.2	281.2	264.9	250.7	235.5	221.4	206.1
30°	415.6	399.3	385.7	371.6	350.1	333.7	314.5	295.3	274.5	260.3	237.2
32.5°	497.0	479.4	459.1	438.8	419.0	395.9	372.1	348.4	325.3	299.3	275.6
35°	596.3	575.4	552.3	530.3	499.8	474.9	445.0	412.2	386.3	356.3	326.4
37.5°	727.9	693.5	673.1	650.0	608.8	574.9	541.6	508.8	463.1	431.4	389.1
40°	892.8	872.5	839.2	801.9	764.6	720.0	674.8	631.4	578.3	534.2	485.1
42.5°	1086.5	1056.6	1022.7	969.1	931.2	878.7	827.3	769.7	704.8	648.3	590.7
45°	1268.4	1232.8	1206.8	1153.2	1113.6	1051.5	989.4	928.4	853.3	780.4	713.8
47.5°	1464.9	1435.5	1392.6	1349.1	1309.0	1239.0	1171.8	1097.8	1018.7	932.3	845.9
50°	1637.7	1614.5	1585.2	1532.6	1488.0	1429.3	1350.2	1269.5	1169.5	1083.7	985.4
52.5°	1784.5	1766.4	1725.2	1687.9	1647.8	1592.5	1521.9	1444.5	1336.7	1242.4	1130.6
55°	1957.9	1944.9	1908.7	1885.6	1850.0	1796.9	1730.9	1659.1	1545.1	1442.3	1315.8
57.5°	2241.9	2231.8	2200.1	2190.5	2155.5	2109.2	2027.9	1951.1	1817.8	1690.2	1545.6
60°	2712.3	2692.0	2645.7	2622.0	2548.0	2485.9	2380.3	2274.7	2113.7	1951.1	1777.2
62.5°	3216.1	3159.0	3070.9	2995.3	2890.2	2782.4	2641.2	2479.7	2291.1	2097.9	1898.0
65°	3487.7	3390.6	3279.3	3159.0	3022.9	2864.2	2686.4	2492.7	2289.9	2086.1	1874.9
66°	3518.8	3409.2	3291.2	3157.3	3006.0	2837.1	2656.4	2453.1	2242.5	2043.7	1832.5
67.5°	3479.8	3365.1	3240.3	3091.8	2928.1	2753.0	2563.3	2352.0	2149.3	1947.7	1742.2
70°	3207.0	3093.0	2981.7	2825.3	2650.8	2474.6	2295.0	2059.0	1867.0	1681.7	1498.8
72.5°	2561.0	2483.6	2373.5	2239.7	2069.7	1863.0	1713.4	1502.1	1335.6	1156.0	1014.2
75°	1600.4	1491.4	1355.3	1184.8	1054.9	887.2	799.6	639.3	544.4	461.4	381.2
77.5°	818.3	736.4	641.0	545.0	452.9	361.4	279.5	197.7	133.3	92.6	68.9
80°	676.0	603.7	524.6	437.1	355.8	276.1	198.8	135.5	86.4	56.5	44.0
82.5°	558.5	497.5	426.9	345.6	275.0	216.9	150.8	98.3	61.0	39.5	31.1
85°	237.7	215.7	166.6	132.1	99.4	73.4	51.4	34.4	24.3	19.8	18.1
87.5°	10.2	11.3	10.7	8.5	6.2	6.2	5.6	4.5	4.5	4.5	4.5
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°	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7	88.7
2.5°	92.6	92.0	91.5	91.5	90.9	90.4	87.0	84.1	80.8	78.5	76.2
5°	96.6	96.0	94.9	94.3	93.2	92.6	85.3	79.1	74.0	70.0	67.2
7.5°	100.5	100.0	98.3	96.6	96.0	94.9	83.0	75.1	68.3	63.8	61.0
10°	105.6	103.9	102.2	100.0	98.3	96.6	80.8	70.6	63.2	59.3	56.5
12.5°	112.9	110.1	107.3	104.5	102.2	99.4	79.6	66.6	59.3	54.8	52.0
15°	121.4	117.5	114.1	110.7	106.7	103.9	77.4	63.2	55.9	51.4	48.0
17.5°	129.3	124.8	119.7	114.6	110.7	106.7	75.1	59.9	52.5	48.0	44.6
20°	140.6	133.8	127.6	121.4	115.8	110.7	71.7	56.5	49.7	44.6	41.2
22.5°	153.0	145.1	137.2	128.8	121.4	114.6	68.9	53.6	46.9	41.8	37.8
25°	168.9	159.3	148.5	137.8	129.3	120.3	66.1	50.8	44.0	39.0	35.0
27.5°	190.9	177.3	165.5	151.9	138.9	128.8	63.8	48.6	41.2	36.1	32.2
30°	220.8	201.0	182.4	167.7	152.5	137.8	61.6	45.7	39.0	33.3	28.8
32.5°	254.1	231.0	209.5	187.5	168.3	151.3	59.3	43.5	36.1	30.5	26.5
35°	295.3	266.0	237.2	211.8	188.6	166.0	57.0	41.2	33.9	27.7	23.7
37.5°	354.6	317.9	280.1	247.3	217.4	187.5	55.3	39.0	31.1	24.8	20.9
40°	436.0	388.5	342.2	297.6	258.6	221.4	53.1	36.7	28.8	22.6	18.6
42.5°	524.1	466.5	405.5	355.2	301.6	254.7	50.8	34.4	26.5	20.3	16.4
45°	633.6	561.9	487.9	419.6	354.1	293.7	48.6	32.2	23.7	18.1	14.1
47.5°	753.3	661.8	578.3	492.4	414.5	342.2	45.7	30.5	21.5	15.8	12.4
50°	876.4	779.9	674.3	576.6	484.0	390.8	42.9	27.7	19.2	14.1	10.2
52.5°	1009.1	895.1	787.2	665.8	557.9	454.6	40.1	25.4	17.5	12.4	8.5
55°	1178.0	1050.4	923.9	787.8	657.9	528.6	37.3	22.6	15.2	10.7	6.8
57.5°	1390.3	1239.0	1083.7	930.1	772.5	625.7	35.0	19.8	13.0	9.0	5.6
60°	1590.8	1414.1	1226.0	1049.2	871.4	700.2	31.6	17.5	11.3	7.3	5.6
62.5°	1694.7	1493.1	1290.4	1095.6	905.8	726.8	28.2	14.7	9.6	6.2	5.1
65°	1669.3	1463.7	1267.2	1070.7	884.9	709.8	24.8	13.0	8.5	5.6	5.1
66°	1632.6	1429.3	1231.6	1044.7	867.4	691.8	23.2	12.4	7.9	5.6	4.5
67.5°	1552.4	1355.9	1167.3	993.3	819.4	657.3	20.9	11.3	7.3	5.1	4.5
70°	1326.0	1147.5	996.7	842.0	700.2	554.0	16.9	9.6	6.2	4.5	4.5
72.5°	877.6	756.2	655.6	564.2	471.5	365.9	14.1	7.9	5.1	4.5	4.0
75°	330.9	299.3	256.9	231.0	201.6	176.8	11.3	5.1	4.0	4.0	4.0
77.5°	58.7	54.2	48.0	44.0	40.7	37.3	9.0	3.4	3.4	4.0	4.0
80°	39.5	36.7	33.3	30.5	28.2	25.4	6.2	2.8	3.4	3.4	4.0
82.5°	28.2	26.5	24.8	22.6	20.9	18.6	4.0	2.8	3.4	3.4	3.4
85°	16.9	15.8	14.7	13.6	11.9	11.3	2.8	2.8	2.8	3.4	3.4
87.5°	4.5	4.0	4.5	4.5	3.4	4.0	2.3	2.3	2.3	2.8	2.8
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: P150656

CATALOG NUMBER: TLM-F02-LED-E1-SL3-HSS-7050

**CANDELA DISTRIBUTION (continued):**

	145°	155°	165°	175°	180°
0°	88.7	88.7	88.7	88.7	88.7
2.5°	75.1	75.1	74.0	75.7	75.7
5°	64.9	64.9	64.4	64.9	64.9
7.5°	59.3	58.7	58.7	58.7	59.3
10°	54.2	53.6	53.6	53.6	53.6
12.5°	49.7	49.1	48.6	49.1	49.1
15°	45.7	44.6	44.6	44.6	44.6
17.5°	42.4	41.2	40.7	40.7	40.7
20°	39.0	37.3	37.3	37.3	37.3
22.5°	35.6	33.9	33.9	33.9	33.9
25°	32.2	30.5	30.5	30.5	30.5
27.5°	29.4	27.7	27.7	27.7	27.7
30°	26.0	24.8	24.8	25.4	24.8
32.5°	23.7	22.0	22.0	22.6	22.6
35°	20.9	19.8	19.8	19.8	19.8
37.5°	18.1	16.9	16.9	16.9	16.9
40°	15.8	14.7	14.1	14.7	14.7
42.5°	13.6	12.4	11.9	11.9	11.9
45°	11.9	10.2	9.6	10.2	10.2
47.5°	9.6	8.5	8.5	9.0	9.0
50°	7.3	7.3	7.9	9.0	9.0
52.5°	6.8	6.8	7.9	9.0	9.0
55°	6.2	6.8	7.9	8.5	9.0
57.5°	5.6	6.8	7.9	8.5	8.5
60°	5.6	6.2	7.3	8.5	8.5
62.5°	5.1	5.6	6.8	7.9	7.9
65°	5.1	5.6	6.8	7.9	7.9
66°	5.1	5.6	6.8	7.9	7.9
67.5°	5.1	5.6	6.8	7.9	7.9
70°	5.1	5.6	6.8	7.3	7.3
72.5°	4.5	5.1	6.2	7.3	7.3
75°	4.5	5.1	6.2	7.3	7.3
77.5°	4.5	5.1	6.2	7.3	7.3
80°	4.5	5.1	6.2	6.8	7.3
82.5°	4.0	5.1	5.6	6.8	6.8
85°	4.0	4.5	5.6	6.2	6.8
87.5°	3.4	4.0	4.5	5.6	5.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)