

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: P156633

Luminaire Tested: **TLM-F03-LED-E1-T4-8030**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P156633  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33673)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: TLM-F03-LED-E1-T4-8030  
Description: TALON MEDIUM LED SITE LUMINAIRE  
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 4  
Light Source: (21) 3000K CCT, 80 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6316.7 lumens  
Efficiency: N/A  
Efficacy: 80.7 lumens/watt  
Spacing Criteria (0/90/45): 1.73 / 2.02 / 2.64  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
CIE Type: Direct

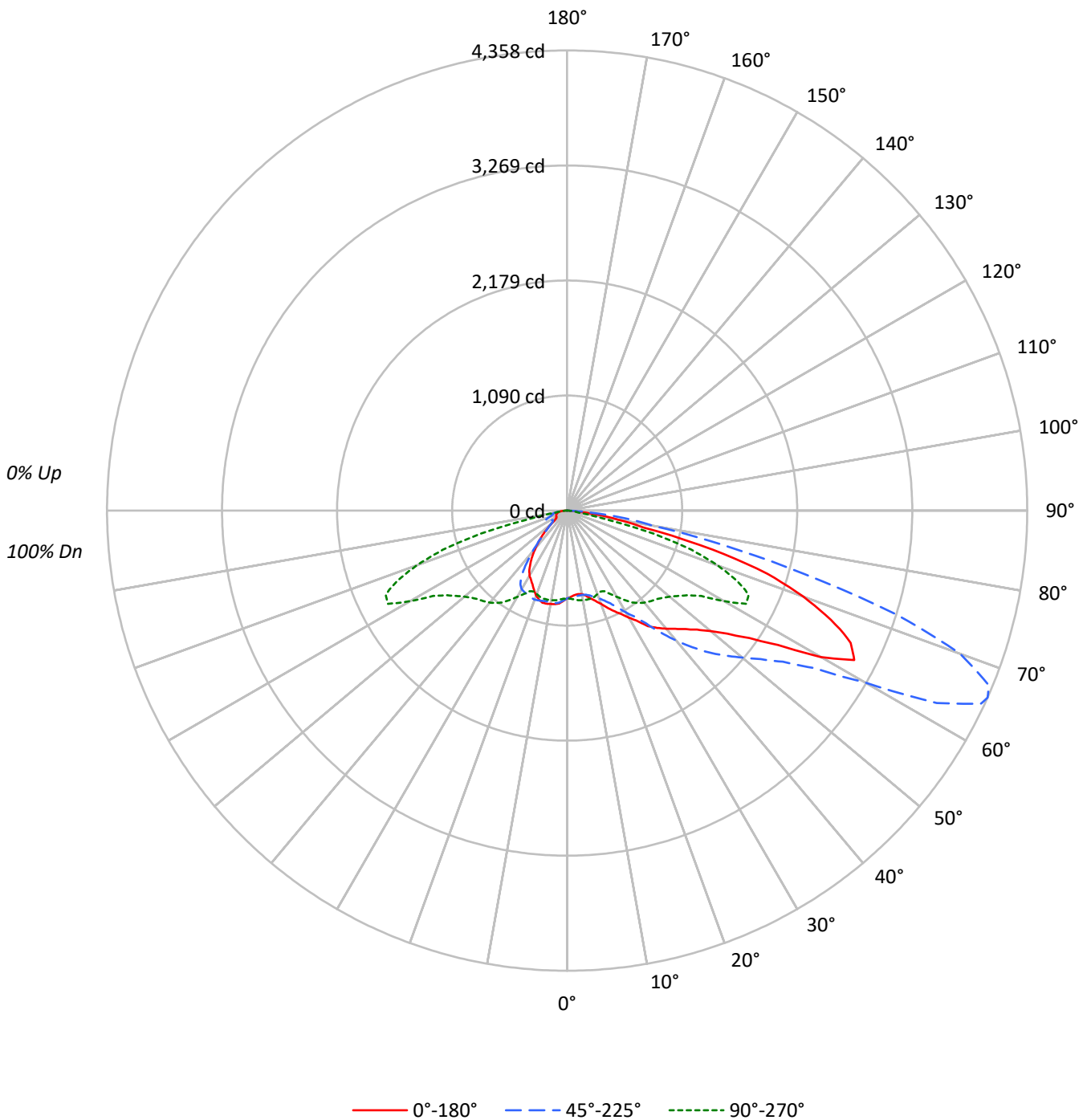
Input Watts (W): 78.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	105	99	93	88	102	96	91	87	92	88	84	88	84	81	84	81	79	76					76			
2	92	81	72	65	89	79	71	64	76	69	62	72	66	61	69	64	59	57					57			
3	82	68	58	49	79	66	57	49	63	55	48	60	53	47	57	51	46	43					43			
4	73	58	47	39	70	57	46	38	54	45	38	51	43	37	49	42	36	34					34			
5	66	50	39	31	64	49	39	31	47	38	31	45	36	30	42	35	30	27					27			
6	60	44	34	26	58	43	33	26	41	32	25	39	31	25	38	30	25	22					22			
7	55	39	29	22	53	38	29	22	37	28	22	35	27	21	34	27	21	19					19			
8	51	35	26	19	49	35	25	19	33	25	19	32	24	18	31	23	18	16					16			
9	47	32	23	16	46	31	23	16	30	22	16	29	22	16	28	21	16	14					14			
10	44	29	21	15	43	29	20	15	28	20	14	27	19	14	26	19	14	12					12			

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

	0°	90°	180°
0°	17924	17924	17924
5°	17344	18308	19092
10°	17545	18856	19632
15°	19225	19241	20141
20°	21549	19283	19633
25°	24941	20041	18387
30°	29097	23469	17684
35°	35100	27868	15913
40°	41021	31995	13138
45°	48344	36208	9992
50°	59434	42470	6394
55°	79051	52407	4785
60°	119363	73858	5042
65°	150943	96535	5822
70°	149723	95384	6930
75°	118744	70642	8517
80°	60202	14852	10625
85°	8769	12227	13585



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	80.8	1.3
10°-20°	245.5	3.9
20°-30°	422.8	6.7
30°-40°	639.7	10.1
40°-50°	829.1	13.1
50°-60°	1143.1	18.1
60°-70°	1776.0	28.1
70°-80°	1032.8	16.3
80°-90°	146.9	2.3
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°	749.1	11.9
0°-40°	1388.8	22.0
0°-60°	3361.1	53.2
0°-90°	6316.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6316.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	833	833	833	833	833	
5°	803	814	847	875	884	77
15°	863	833	863	886	904	247
25°	1050	971	844	882	774	490
35°	1336	1305	1060	748	606	835
45°	1588	1901	1189	314	328	1241
55°	2106	2495	1396	162	128	1951
65°	2963	4326	1895	228	114	2804
75°	1428	2326	849	144	102	1470
85°	36	242	50	58	55	154
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	47.5°
0°	832.6	832.6	832.6	832.6	832.6	832.6	832.6	832.6	832.6	832.6	832.6
2.5°	817.3	820.1	818.0	818.7	818.7	819.4	819.4	820.1	819.4	821.5	822.8
5°	802.6	804.0	803.3	804.7	806.1	808.9	808.2	811.7	812.4	814.5	818.0
7.5°	797.1	795.7	796.4	798.5	799.9	801.2	802.6	805.4	807.5	812.4	815.2
10°	802.6	801.9	802.6	804.0	804.0	804.7	803.3	806.1	807.5	811.7	814.5
12.5°	825.6	825.6	824.2	824.2	822.8	821.5	818.0	815.9	815.2	815.9	817.3
15°	862.6	861.2	858.4	856.3	853.5	848.6	843.7	839.6	836.8	832.6	831.2
17.5°	898.8	896.7	893.9	891.1	887.6	882.8	875.1	870.2	862.6	857.7	854.9
20°	940.6	936.4	932.9	929.4	922.5	921.1	913.4	905.1	896.0	884.9	883.5
22.5°	994.9	988.0	983.8	981.7	974.7	972.6	960.1	948.3	937.1	922.5	919.0
25°	1050.0	1043.0	1040.9	1038.1	1033.3	1030.5	1018.6	1005.4	990.8	970.6	966.4
27.5°	1103.6	1104.3	1098.8	1100.8	1099.4	1094.6	1082.7	1069.5	1058.3	1034.7	1029.8
30°	1170.5	1166.3	1163.5	1167.7	1162.9	1163.5	1153.1	1146.1	1128.0	1114.1	1104.3
32.5°	1240.2	1239.5	1243.7	1246.5	1245.8	1244.4	1236.0	1229.0	1213.0	1192.8	1188.6
35°	1335.6	1339.8	1343.3	1355.8	1355.8	1364.9	1356.5	1348.2	1329.4	1305.0	1296.6
37.5°	1400.4	1401.8	1415.8	1432.5	1453.4	1472.9	1478.5	1480.6	1472.9	1454.8	1442.2
40°	1459.7	1462.4	1484.7	1510.5	1541.2	1579.5	1602.5	1612.9	1615.0	1606.7	1579.5
42.5°	1518.9	1523.1	1546.1	1583.7	1626.2	1675.0	1715.4	1741.1	1755.8	1755.8	1739.7
45°	1587.9	1593.4	1618.5	1659.6	1709.1	1770.4	1826.1	1875.6	1899.3	1900.7	1885.4
47.5°	1669.4	1674.3	1703.5	1745.3	1796.2	1858.2	1928.6	1985.0	2028.9	2031.7	2019.1
50°	1774.6	1781.6	1805.9	1843.6	1895.8	1958.5	2028.9	2107.6	2153.6	2164.8	2151.5
52.5°	1913.9	1915.3	1935.5	1970.4	2021.2	2081.1	2155.7	2241.4	2302.0	2311.1	2289.5
55°	2106.2	2104.1	2117.4	2155.0	2193.3	2240.0	2317.3	2413.5	2481.1	2495.0	2472.7
57.5°	2367.5	2365.4	2376.6	2385.6	2457.4	2502.7	2578.6	2670.6	2736.1	2776.5	2738.2
60°	2772.3	2770.2	2788.3	2841.3	2894.9	2961.1	3035.0	3145.1	3237.0	3248.9	3211.3
62.5°	3065.6	3076.1	3115.8	3177.8	3286.5	3416.1	3551.3	3696.2	3885.0	3944.9	3926.8
65°	2963.2	2984.1	3039.2	3133.2	3278.1	3457.2	3669.0	3931.7	4184.6	4326.0	4321.9
66°	2871.2	2894.2	2961.8	3052.4	3205.7	3401.5	3632.8	3919.1	4202.0	4358.1	4367.8
67.5°	2704.0	2729.8	2796.0	2903.3	3052.4	3260.7	3509.5	3820.9	4140.7	4322.5	4348.3
70°	2378.7	2407.9	2456.0	2544.5	2691.5	2877.5	3139.5	3418.2	3753.3	3961.6	3993.0
72.5°	1988.5	2014.3	2067.9	2140.4	2260.9	2378.0	2583.5	2789.0	3028.7	3266.3	3243.3
75°	1427.6	1438.8	1470.8	1549.5	1614.3	1719.5	1884.7	2053.3	2217.0	2325.7	2341.0
77.5°	742.0	771.3	816.6	903.7	974.0	1068.8	1176.1	1302.9	1422.7	1522.4	1495.2
80°	485.6	498.2	538.6	583.2	634.7	695.3	767.1	814.5	829.8	823.5	829.8
82.5°	280.1	303.1	356.7	390.9	429.2	450.1	507.2	561.6	592.2	553.9	540.0
85°	35.5	46.0	144.9	182.5	209.0	240.4	257.8	290.5	271.0	242.5	295.4
87.5°	7.7	7.0	9.8	20.9	21.6	18.1	34.1	36.2	22.3	11.1	13.9
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):**

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	832.6	832.6	832.6	832.6	832.6	832.6	832.6	832.6	832.6	832.6	832.6
2.5°	824.2	824.9	826.3	828.4	829.8	831.2	832.6	834.7	836.1	837.5	840.3
5°	820.8	823.5	826.3	829.1	832.6	838.2	841.7	844.4	847.2	852.8	854.9
7.5°	818.7	823.5	827.7	832.6	838.2	843.1	849.3	852.8	857.0	860.5	864.6
10°	817.3	824.2	828.4	835.4	841.7	846.5	853.5	857.7	862.6	866.7	868.8
12.5°	820.1	823.5	827.7	834.7	842.4	849.3	857.0	860.5	864.6	868.1	868.8
15°	831.9	831.9	832.6	838.2	845.8	851.4	857.7	861.2	863.3	865.3	865.3
17.5°	853.5	848.6	845.1	845.8	850.7	854.2	857.7	857.7	856.3	855.6	854.2
20°	878.6	872.3	865.3	860.5	859.1	856.3	854.2	847.2	841.7	836.8	833.3
22.5°	914.8	905.1	895.3	886.2	877.9	867.4	855.6	841.7	828.4	819.4	813.8
25°	959.4	951.7	939.9	926.0	915.5	896.0	880.7	860.5	843.7	831.9	822.1
27.5°	1022.8	1013.8	1002.6	990.1	974.7	953.1	934.3	910.6	890.4	873.0	860.5
30°	1101.5	1089.7	1081.3	1066.0	1055.6	1031.2	1012.4	983.1	944.1	916.2	898.8
32.5°	1182.4	1169.1	1162.2	1150.3	1138.5	1123.8	1095.3	1050.0	999.8	954.5	924.6
35°	1290.4	1276.4	1263.9	1253.4	1236.0	1208.8	1183.8	1129.4	1060.4	997.0	946.9
37.5°	1426.2	1403.2	1371.9	1345.4	1314.7	1275.7	1237.4	1181.7	1102.9	1020.7	953.8
40°	1571.1	1530.7	1486.1	1436.7	1383.7	1327.3	1283.4	1227.0	1138.5	1040.9	949.0
42.5°	1722.3	1658.2	1596.2	1526.5	1452.7	1385.8	1328.7	1266.7	1164.9	1046.5	929.4
45°	1872.1	1800.4	1706.3	1615.0	1521.7	1438.8	1374.7	1305.0	1189.3	1048.6	903.7
47.5°	1996.1	1922.3	1815.0	1700.7	1590.0	1495.9	1420.6	1345.4	1222.1	1063.2	897.4
50°	2127.1	2037.3	1918.1	1782.9	1657.5	1552.3	1472.2	1394.2	1268.1	1100.8	917.6
52.5°	2270.0	2166.8	2027.5	1876.3	1739.1	1621.3	1534.2	1454.1	1326.6	1153.8	955.9
55°	2444.1	2318.0	2166.8	1996.1	1849.1	1718.8	1622.7	1527.9	1396.3	1216.5	1004.0
57.5°	2710.3	2555.6	2385.6	2191.2	2028.2	1874.2	1759.3	1649.9	1504.3	1309.9	1069.5
60°	3191.7	3026.6	2805.8	2570.3	2378.7	2198.9	2030.3	1894.4	1715.4	1493.8	1214.4
62.5°	3881.5	3662.0	3367.3	3037.8	2786.9	2527.8	2337.5	2135.5	1913.2	1674.3	1385.1
65°	4264.7	3998.6	3604.2	3221.7	2899.1	2617.6	2375.9	2141.8	1895.1	1666.6	1424.8
66°	4312.1	4034.8	3625.1	3222.4	2883.8	2594.6	2340.3	2097.9	1845.7	1627.6	1408.1
67.5°	4292.6	4009.0	3586.8	3161.8	2817.6	2506.9	2244.2	1992.7	1741.1	1537.7	1352.4
70°	3972.8	3703.8	3289.3	2877.5	2550.7	2244.2	1993.4	1746.0	1515.4	1341.2	1204.7
72.5°	3299.0	3069.1	2708.9	2385.6	2129.2	1876.3	1663.8	1427.6	1232.5	1103.6	1022.8
75°	2381.4	2242.1	1913.9	1728.6	1503.6	1335.6	1129.4	989.4	849.3	786.6	772.7
77.5°	1504.3	1316.8	1108.5	912.7	750.4	622.2	484.2	411.1	342.8	335.8	405.5
80°	761.5	685.6	528.1	420.8	353.9	286.4	226.4	171.4	119.8	144.2	172.8
82.5°	498.9	416.0	326.1	268.2	233.4	193.7	150.5	104.5	76.6	86.4	118.4
85°	269.6	229.9	185.3	146.3	118.4	105.9	71.1	50.2	49.5	53.0	67.6
87.5°	19.5	19.5	15.3	13.9	16.7	13.9	12.5	12.5	11.8	12.5	16.7
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):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	832.6	832.6	832.6	832.6	832.6	832.6	832.6	832.6	832.6	832.6	832.6
2.5°	841.7	843.7	844.4	847.9	850.0	851.4	852.8	852.8	853.5	855.6	856.3
5°	857.7	861.2	865.3	868.1	869.5	873.7	875.1	875.1	876.5	879.3	881.4
7.5°	867.4	872.3	876.5	877.9	880.7	882.1	884.2	885.6	885.6	888.3	889.7
10°	870.9	873.7	877.9	877.9	880.7	880.7	882.8	883.5	883.5	886.2	888.3
12.5°	870.9	872.3	875.8	875.8	877.9	878.6	881.4	883.5	884.2	887.6	890.4
15°	866.7	868.1	870.9	871.6	876.5	879.3	885.6	889.7	889.7	893.2	894.6
17.5°	854.9	858.4	864.0	869.5	878.6	884.9	892.5	896.0	893.2	891.1	889.0
20°	835.4	841.7	854.9	868.8	884.9	893.2	897.4	893.9	884.2	874.4	868.1
22.5°	815.9	828.4	850.7	871.6	889.7	895.3	893.2	880.7	864.6	852.8	844.4
25°	824.9	839.6	861.2	880.0	891.8	890.4	882.1	864.6	847.2	831.9	818.0
27.5°	862.6	878.6	890.4	896.7	895.3	885.6	872.3	852.8	831.9	811.7	792.2
30°	898.1	906.5	909.2	904.4	893.2	877.2	860.5	838.2	810.3	785.2	762.9
32.5°	914.1	905.8	892.5	879.3	861.2	847.2	824.2	799.9	765.0	735.1	712.8
35°	914.1	880.7	847.2	819.4	792.2	774.8	748.3	715.5	683.5	658.4	641.0
37.5°	893.9	829.8	774.8	729.5	695.3	676.5	636.8	607.6	580.4	572.0	560.9
40°	857.0	762.2	682.8	623.6	580.4	552.5	512.8	492.6	482.1	478.0	475.9
42.5°	807.5	687.0	581.1	507.9	461.2	429.9	403.4	390.9	390.2	389.5	389.5
45°	754.6	606.2	482.1	395.0	353.9	326.1	313.5	308.7	312.8	312.1	312.8
47.5°	721.8	544.8	391.6	298.9	267.5	249.4	243.2	245.3	248.7	247.3	247.3
50°	717.6	513.5	330.9	232.7	209.0	200.0	198.6	198.6	200.7	199.3	198.6
52.5°	733.0	508.6	299.6	200.0	181.2	173.5	172.1	171.4	170.7	166.5	163.0
55°	759.4	519.8	290.5	191.6	172.1	163.7	161.6	160.2	157.5	151.9	145.6
57.5°	812.4	554.6	298.9	195.8	174.9	167.9	165.8	165.8	160.2	151.2	142.1
60°	939.9	643.1	333.0	211.8	188.1	181.2	182.5	181.8	173.5	160.2	146.3
62.5°	1104.3	758.7	377.6	234.1	204.8	203.4	210.4	209.0	195.1	174.9	154.7
65°	1180.3	813.1	390.2	239.0	208.3	214.6	228.5	227.1	209.7	181.8	156.1
66°	1181.7	813.1	384.6	234.8	203.4	211.1	225.0	224.3	206.9	179.1	153.3
67.5°	1153.1	790.8	368.6	226.4	193.7	199.3	211.8	211.1	195.1	172.1	147.7
70°	1045.8	707.9	327.5	211.8	180.5	177.7	181.8	179.1	168.6	152.6	135.9
72.5°	896.0	594.3	285.7	200.7	171.4	160.2	157.5	155.4	147.0	138.0	127.5
75°	705.8	470.3	250.8	192.3	163.0	148.4	143.5	140.7	135.2	128.9	120.5
77.5°	435.5	336.5	218.8	181.2	156.8	142.1	138.7	134.5	126.1	118.4	112.2
80°	194.4	208.3	179.8	158.2	140.0	126.8	121.2	115.0	106.6	101.7	98.2
82.5°	129.6	134.5	130.3	118.4	105.9	95.5	87.1	87.1	85.7	81.5	80.1
85°	82.9	83.6	80.8	73.2	68.3	62.0	58.5	59.2	62.0	61.3	60.6
87.5°	18.8	18.8	22.3	20.9	24.4	25.8	27.9	30.0	34.1	34.1	36.2
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: P156633

CATALOG NUMBER: TLM-F03-LED-E1-T4-8030

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	832.6	832.6	832.6	832.6	832.6
2.5°	857.0	858.4	859.8	857.7	858.4
5°	881.4	880.7	884.2	882.1	883.5
7.5°	889.0	889.7	892.5	892.5	893.2
10°	889.7	891.1	894.6	896.7	898.1
12.5°	893.2	896.0	901.6	903.0	903.0
15°	896.0	897.4	900.9	902.3	903.7
17.5°	886.2	883.5	884.9	885.6	884.9
20°	861.9	859.1	858.4	855.6	857.0
22.5°	835.4	827.7	822.8	817.3	817.3
25°	803.3	791.5	781.7	772.0	774.1
27.5°	773.4	758.0	748.3	742.0	740.6
30°	744.1	728.1	719.0	711.4	711.4
32.5°	695.3	684.2	672.3	667.5	666.8
35°	627.8	620.8	611.0	608.9	605.5
37.5°	551.8	549.7	541.4	540.7	537.2
40°	472.4	473.8	471.0	469.6	467.5
42.5°	393.0	399.9	398.5	397.8	396.4
45°	317.0	321.9	322.6	324.7	328.2
47.5°	249.4	250.8	252.2	251.5	252.2
50°	195.1	191.6	190.9	188.8	190.9
52.5°	157.5	151.9	149.1	146.3	144.9
55°	138.7	133.1	130.3	128.9	127.5
57.5°	133.8	128.2	124.0	121.2	120.5
60°	135.2	126.8	121.2	117.7	117.1
62.5°	138.7	127.5	119.8	116.4	115.7
65°	138.0	126.1	119.1	115.0	114.3
66°	135.9	124.7	117.7	114.3	113.6
67.5°	132.4	122.6	116.4	113.6	112.2
70°	126.1	119.8	115.0	111.5	110.1
72.5°	120.5	115.7	111.5	108.0	107.3
75°	114.3	110.1	105.9	103.1	102.4
77.5°	106.6	102.4	99.6	97.5	96.8
80°	94.1	91.3	88.5	85.7	85.7
82.5°	78.0	75.9	73.2	71.1	70.4
85°	59.9	59.9	57.8	55.7	55.0
87.5°	35.5	34.8	34.8	32.7	32.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)