

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: P156632

Luminaire Tested: **TLM-E03-LED-E1-T4-7060**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P156632  
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-E03-LED-E1-T4-7060  
Description: TALON MEDIUM LED SITE LUMINAIRE  
(3) LIGHTBARS WITH AccuLED OPTICS - TYPE 4  
Light Source: (63) 5700K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9302.8 lumens  
Efficiency: N/A  
Efficacy: 123.7 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

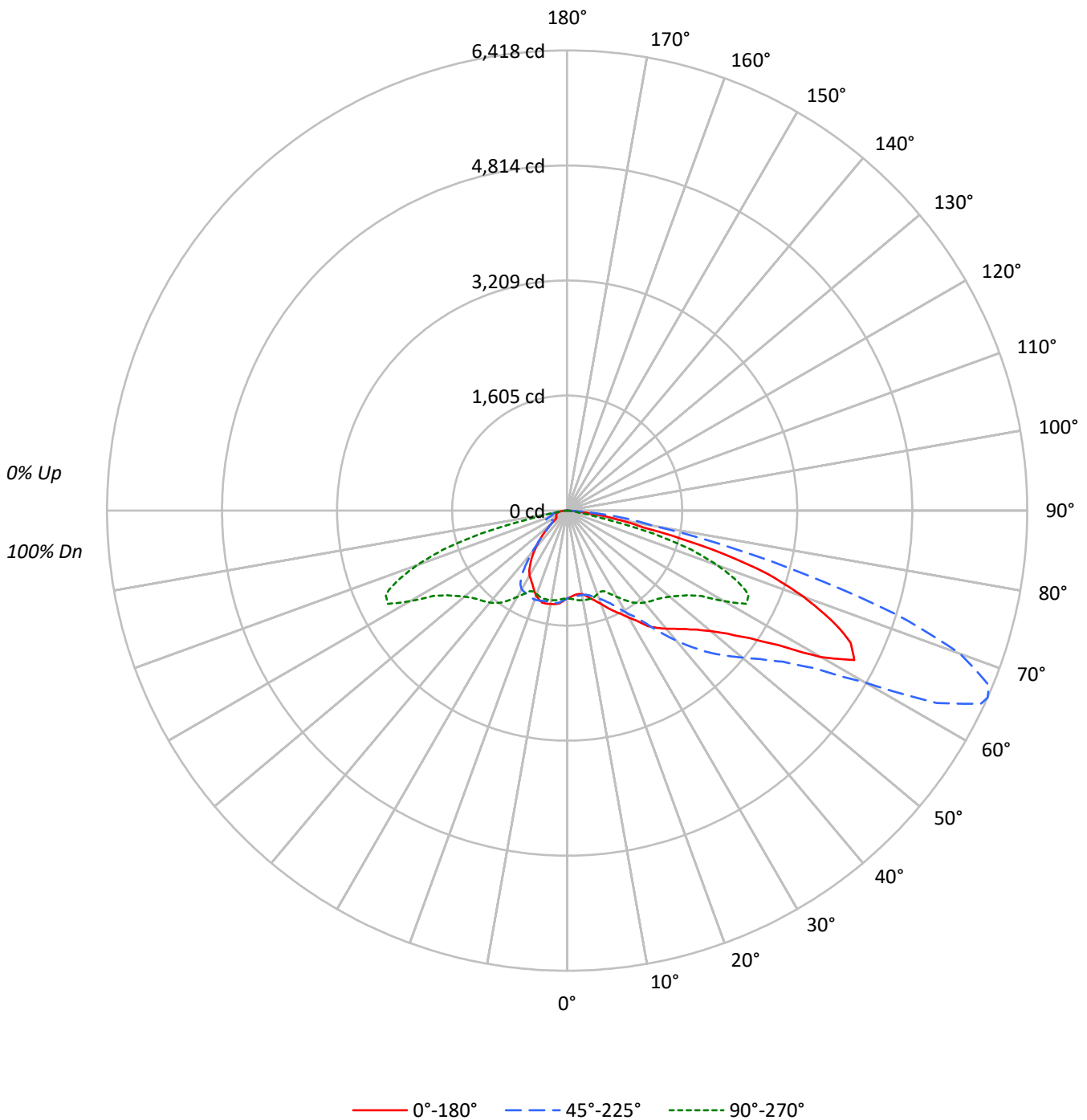
Input Watts (W): 75.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	26397	26397	26397
5°	25545	26963	28117
10°	25841	27769	28912
15°	28311	28334	29662
20°	31734	28396	28914
25°	36730	29516	27079
30°	42853	34563	26044
35°	51694	41042	23434
40°	60412	47120	19349
45°	71196	53327	14714
50°	87530	62545	9418
55°	116422	77178	7049
60°	175792	108772	7423
65°	222299	142171	8573
70°	220496	140477	10203
75°	174880	104038	12543
80°	88666	21881	15645
85°	12918	18007	20032



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.1	1.3
10°-20°	361.5	3.9
20°-30°	622.7	6.7
30°-40°	942.1	10.1
40°-50°	1221.1	13.1
50°-60°	1683.5	18.1
60°-70°	2615.6	28.1
70°-80°	1521.0	16.3
80°-90°	216.3	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°	1103.3	11.9
0°-40°	2045.4	22.0
0°-60°	4950.0	53.2
0°-90°	9302.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9302.8	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1226	1226	1226	1226	1226	
5°	1182	1200	1248	1289	1301	113
15°	1270	1226	1271	1304	1331	364
25°	1546	1429	1243	1299	1140	721
35°	1967	1922	1562	1102	892	1229
45°	2338	2799	1752	462	483	1828
55°	3102	3674	2056	238	188	2873
65°	4364	6371	2791	337	168	4130
75°	2102	3425	1251	211	151	2165
85°	52	357	73	86	81	226
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°	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2
2.5°	1203.6	1207.7	1204.6	1205.7	1205.7	1206.7	1206.7	1207.7	1206.7	1209.8	1211.8
5°	1182.1	1184.1	1183.1	1185.2	1187.2	1191.3	1190.3	1195.4	1196.4	1199.5	1204.6
7.5°	1173.9	1171.8	1172.8	1175.9	1178.0	1180.0	1182.1	1186.2	1189.3	1196.4	1200.5
10°	1182.1	1181.0	1182.1	1184.1	1184.1	1185.2	1183.1	1187.2	1189.3	1195.4	1199.5
12.5°	1215.9	1215.9	1213.9	1213.9	1211.8	1209.8	1204.6	1201.6	1200.5	1201.6	1203.6
15°	1270.3	1268.3	1264.2	1261.1	1257.0	1249.8	1242.6	1236.5	1232.4	1226.2	1224.1
17.5°	1323.7	1320.6	1316.5	1312.4	1307.3	1300.1	1288.8	1281.6	1270.3	1263.1	1259.0
20°	1385.2	1379.1	1374.0	1368.8	1358.6	1356.5	1345.2	1332.9	1319.6	1303.2	1301.1
22.5°	1465.3	1455.0	1448.9	1445.8	1435.5	1432.4	1414.0	1396.5	1380.1	1358.6	1353.4
25°	1546.3	1536.1	1533.0	1528.9	1521.7	1517.6	1500.2	1480.7	1459.1	1429.4	1423.2
27.5°	1625.4	1626.4	1618.2	1621.2	1619.2	1612.0	1594.6	1575.1	1558.7	1523.8	1516.6
30°	1723.9	1717.7	1713.6	1719.8	1712.6	1713.6	1698.2	1687.9	1661.3	1640.7	1626.4
32.5°	1826.5	1825.4	1831.6	1835.7	1834.7	1832.6	1820.3	1810.0	1786.4	1756.7	1750.5
35°	1967.0	1973.2	1978.3	1996.8	1996.8	2010.1	1997.8	1985.5	1957.8	1921.9	1909.6
37.5°	2062.5	2064.5	2085.0	2109.7	2140.5	2169.2	2177.4	2180.5	2169.2	2142.5	2124.0
40°	2149.7	2153.8	2186.6	2224.6	2269.7	2326.2	2360.0	2375.4	2378.5	2366.2	2326.2
42.5°	2236.9	2243.1	2276.9	2332.3	2394.9	2466.8	2526.3	2564.2	2585.8	2585.8	2562.2
45°	2338.5	2346.7	2383.6	2444.2	2517.0	2607.3	2689.4	2762.3	2797.2	2799.2	2776.6
47.5°	2458.5	2465.7	2508.8	2570.4	2645.3	2736.6	2840.3	2923.4	2988.0	2992.1	2973.7
50°	2613.5	2623.8	2659.7	2715.1	2792.0	2884.4	2988.0	3104.0	3171.7	3188.1	3168.6
52.5°	2818.7	2820.8	2850.5	2901.8	2976.7	3065.0	3174.8	3301.0	3390.3	3403.6	3371.8
55°	3101.9	3098.8	3118.3	3173.7	3230.2	3298.9	3412.8	3554.4	3654.0	3674.5	3641.6
57.5°	3486.7	3483.6	3500.0	3513.4	3619.1	3685.8	3797.6	3933.1	4029.5	4089.0	4032.6
60°	4082.9	4079.8	4106.5	4184.5	4263.5	4360.9	4469.7	4631.8	4767.3	4784.7	4729.3
62.5°	4514.9	4530.3	4588.7	4680.1	4840.1	5031.0	5230.1	5443.5	5721.6	5809.8	5783.1
65°	4364.0	4394.8	4475.9	4614.4	4827.8	5091.5	5403.5	5790.3	6162.8	6371.1	6364.9
66°	4228.6	4262.4	4362.0	4495.4	4721.1	5009.4	5350.1	5771.8	6188.4	6418.3	6432.7
67.5°	3982.3	4020.3	4117.8	4275.8	4495.4	4802.2	5168.5	5627.2	6098.1	6366.0	6403.9
70°	3503.1	3546.2	3617.0	3747.3	3963.8	4237.8	4623.6	5034.1	5527.6	5834.4	5880.6
72.5°	2928.5	2966.5	3045.5	3152.2	3329.7	3502.1	3804.8	4107.5	4460.5	4810.4	4776.5
75°	2102.5	2118.9	2166.1	2282.1	2377.5	2532.4	2775.6	3023.9	3265.1	3425.1	3447.7
77.5°	1092.8	1135.9	1202.6	1330.9	1434.5	1574.0	1732.1	1918.8	2095.3	2242.0	2202.0
80°	715.2	733.7	793.2	858.9	934.8	1024.1	1129.7	1199.5	1222.1	1212.9	1222.1
82.5°	412.5	446.4	525.4	575.6	632.1	662.9	747.0	827.0	872.2	815.8	795.2
85°	52.3	67.7	213.4	268.8	307.8	354.0	379.7	427.9	399.2	357.1	435.1
87.5°	11.3	10.3	14.4	30.8	31.8	26.7	50.3	53.4	32.8	16.4	20.5
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):**

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2
2.5°	1213.9	1214.9	1217.0	1220.0	1222.1	1224.1	1226.2	1229.3	1231.3	1233.4	1237.5
5°	1208.8	1212.9	1217.0	1221.1	1226.2	1234.4	1239.5	1243.6	1247.7	1256.0	1259.0
7.5°	1205.7	1212.9	1219.0	1226.2	1234.4	1241.6	1250.8	1256.0	1262.1	1267.2	1273.4
10°	1203.6	1213.9	1220.0	1230.3	1239.5	1246.7	1257.0	1263.1	1270.3	1276.5	1279.6
12.5°	1207.7	1212.9	1219.0	1229.3	1240.6	1250.8	1262.1	1267.2	1273.4	1278.5	1279.6
15°	1225.2	1225.2	1226.2	1234.4	1245.7	1253.9	1263.1	1268.3	1271.3	1274.4	1274.4
17.5°	1257.0	1249.8	1244.7	1245.7	1252.9	1258.0	1263.1	1263.1	1261.1	1260.1	1258.0
20°	1293.9	1284.7	1274.4	1267.2	1265.2	1261.1	1258.0	1247.7	1239.5	1232.4	1227.2
22.5°	1347.3	1332.9	1318.5	1305.2	1292.9	1277.5	1260.1	1239.5	1220.0	1206.7	1198.5
25°	1412.9	1401.7	1384.2	1363.7	1348.3	1319.6	1297.0	1267.2	1242.6	1225.2	1210.8
27.5°	1506.3	1493.0	1476.6	1458.1	1435.5	1403.7	1376.0	1341.1	1311.4	1285.7	1267.2
30°	1622.3	1604.8	1592.5	1569.9	1554.5	1518.6	1490.9	1447.8	1390.4	1349.3	1323.7
32.5°	1741.3	1721.8	1711.5	1694.1	1676.7	1655.1	1613.0	1546.3	1472.5	1405.8	1361.6
35°	1900.3	1879.8	1861.4	1846.0	1820.3	1780.3	1743.4	1663.3	1561.7	1468.4	1394.5
37.5°	2100.4	2066.6	2020.4	1981.4	1936.3	1878.8	1822.4	1740.3	1624.3	1503.2	1404.7
40°	2313.9	2254.4	2188.7	2115.8	2037.8	1954.7	1890.1	1807.0	1676.7	1533.0	1397.6
42.5°	2536.5	2442.1	2350.8	2248.2	2139.4	2040.9	1956.8	1865.5	1715.6	1541.2	1368.8
45°	2757.1	2651.5	2512.9	2378.5	2241.0	2118.9	2024.5	1921.9	1751.6	1544.3	1330.9
47.5°	2939.8	2831.0	2673.0	2504.7	2341.6	2203.0	2092.2	1981.4	1799.8	1565.8	1321.6
50°	3132.7	3000.3	2824.9	2625.8	2441.1	2286.2	2168.2	2053.2	1867.5	1621.2	1351.4
52.5°	3343.1	3191.2	2986.0	2763.3	2561.2	2387.7	2259.5	2141.5	1953.7	1699.2	1407.8
55°	3599.6	3413.9	3191.2	2939.8	2723.3	2531.4	2389.8	2250.2	2056.3	1791.6	1478.6
57.5°	3991.6	3763.8	3513.4	3227.1	2987.0	2760.2	2590.9	2429.8	2215.4	1929.1	1575.1
60°	4700.6	4457.4	4132.1	3785.3	3503.1	3238.4	2990.1	2790.0	2526.3	2200.0	1788.5
62.5°	5716.4	5393.2	4959.2	4473.8	4104.4	3722.7	3442.6	3145.0	2817.7	2465.7	2039.9
65°	6280.8	5888.8	5308.0	4744.7	4269.6	3855.1	3499.0	3154.2	2791.0	2454.4	2098.4
66°	6350.6	5942.2	5338.8	4745.7	4247.1	3821.2	3446.7	3089.6	2718.2	2397.0	2073.8
67.5°	6321.8	5904.2	5282.4	4656.5	4149.6	3691.9	3305.1	2934.7	2564.2	2264.6	1991.7
70°	5850.9	5454.8	4844.2	4237.8	3756.6	3305.1	2935.7	2571.4	2231.8	1975.3	1774.1
72.5°	4858.6	4520.0	3989.5	3513.4	3135.8	2763.3	2450.3	2102.5	1815.2	1625.4	1506.3
75°	3507.2	3302.0	2818.7	2545.8	2214.3	1967.0	1663.3	1457.1	1250.8	1158.5	1138.0
77.5°	2215.4	1939.3	1632.5	1344.2	1105.1	916.3	713.1	605.4	504.8	494.6	597.2
80°	1121.5	1009.7	777.8	619.8	521.3	421.7	333.5	252.4	176.5	212.4	254.5
82.5°	734.7	612.6	480.2	395.1	343.7	285.3	221.6	153.9	112.9	127.2	174.4
85°	397.1	338.6	272.9	215.5	174.4	156.0	104.7	73.9	72.9	78.0	99.5
87.5°	28.7	28.7	22.6	20.5	24.6	20.5	18.5	18.5	17.4	18.5	24.6
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°	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2	1226.2
2.5°	1239.5	1242.6	1243.6	1248.8	1251.8	1253.9	1256.0	1256.0	1257.0	1260.1	1261.1
5°	1263.1	1268.3	1274.4	1278.5	1280.6	1286.7	1288.8	1288.8	1290.8	1294.9	1298.0
7.5°	1277.5	1284.7	1290.8	1292.9	1297.0	1299.0	1302.1	1304.2	1304.2	1308.3	1310.3
10°	1282.6	1286.7	1292.9	1292.9	1297.0	1297.0	1300.1	1301.1	1301.1	1305.2	1308.3
12.5°	1282.6	1284.7	1289.8	1289.8	1292.9	1293.9	1298.0	1301.1	1302.1	1307.3	1311.4
15°	1276.5	1278.5	1282.6	1283.7	1290.8	1294.9	1304.2	1310.3	1310.3	1315.5	1317.5
17.5°	1259.0	1264.2	1272.4	1280.6	1293.9	1303.2	1314.4	1319.6	1315.5	1312.4	1309.3
20°	1230.3	1239.5	1259.0	1279.6	1303.2	1315.5	1321.6	1316.5	1302.1	1287.8	1278.5
22.5°	1201.6	1220.0	1252.9	1283.7	1310.3	1318.5	1315.5	1297.0	1273.4	1256.0	1243.6
25°	1214.9	1236.5	1268.3	1296.0	1313.4	1311.4	1299.0	1273.4	1247.7	1225.2	1204.6
27.5°	1270.3	1293.9	1311.4	1320.6	1318.5	1304.2	1284.7	1256.0	1225.2	1195.4	1166.7
30°	1322.6	1335.0	1339.1	1331.9	1315.5	1291.9	1267.2	1234.4	1193.4	1156.4	1123.6
32.5°	1346.3	1333.9	1314.4	1294.9	1268.3	1247.7	1213.9	1178.0	1126.7	1082.5	1049.7
35°	1346.3	1297.0	1247.7	1206.7	1166.7	1141.0	1102.0	1053.8	1006.6	969.7	944.0
37.5°	1316.5	1222.1	1141.0	1074.3	1024.1	996.3	937.9	894.8	854.7	842.4	826.0
40°	1262.1	1122.6	1005.6	918.4	854.7	813.7	755.2	725.5	710.1	703.9	700.8
42.5°	1189.3	1011.7	855.8	748.0	679.3	633.1	594.1	575.6	574.6	573.6	573.6
45°	1111.3	892.7	710.1	581.8	521.3	480.2	461.7	454.6	460.7	459.7	460.7
47.5°	1063.0	802.4	576.7	440.2	394.0	367.3	358.1	361.2	366.3	364.3	364.3
50°	1056.9	756.2	487.4	342.7	307.8	294.5	292.4	292.4	295.5	293.5	292.4
52.5°	1079.5	749.1	441.2	294.5	266.8	255.5	253.4	252.4	251.4	245.2	240.1
55°	1118.5	765.5	427.9	282.2	253.4	241.1	238.1	236.0	231.9	223.7	214.5
57.5°	1196.4	816.8	440.2	288.3	257.6	247.3	244.2	244.2	236.0	222.7	209.3
60°	1384.2	947.1	490.5	311.9	277.0	266.8	268.8	267.8	255.5	236.0	215.5
62.5°	1626.4	1117.4	556.1	344.8	301.7	299.6	309.9	307.8	287.3	257.6	227.8
65°	1738.2	1197.5	574.6	352.0	306.8	316.0	336.6	334.5	308.9	267.8	229.8
66°	1740.3	1197.5	566.4	345.8	299.6	310.9	331.4	330.4	304.8	263.7	225.7
67.5°	1698.2	1164.6	542.8	333.5	285.3	293.5	311.9	310.9	287.3	253.4	217.5
70°	1540.2	1042.5	482.3	311.9	265.8	261.7	267.8	263.7	248.3	224.7	200.1
72.5°	1319.6	875.3	420.7	295.5	252.4	236.0	231.9	228.8	216.5	203.2	187.8
75°	1039.4	692.6	369.4	283.2	240.1	218.6	211.4	207.3	199.1	189.8	177.5
77.5°	641.3	495.6	322.2	266.8	230.9	209.3	204.2	198.0	185.7	174.4	165.2
80°	286.3	306.8	264.7	232.9	206.2	186.8	178.5	169.3	157.0	149.8	144.7
82.5°	190.9	198.0	191.9	174.4	156.0	140.6	128.3	128.3	126.2	120.1	118.0
85°	122.1	123.1	119.0	107.7	100.6	91.3	86.2	87.2	91.3	90.3	89.3
87.5°	27.7	27.7	32.8	30.8	35.9	38.0	41.0	44.1	50.3	50.3	53.4
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: P156632

CATALOG NUMBER: TLM-E03-LED-E1-T4-7060

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	1226.2	1226.2	1226.2	1226.2	1226.2
2.5°	1262.1	1264.2	1266.2	1263.1	1264.2
5°	1298.0	1297.0	1302.1	1299.0	1301.1
7.5°	1309.3	1310.3	1314.4	1314.4	1315.5
10°	1310.3	1312.4	1317.5	1320.6	1322.6
12.5°	1315.5	1319.6	1327.8	1329.8	1329.8
15°	1319.6	1321.6	1326.8	1328.8	1330.9
17.5°	1305.2	1301.1	1303.2	1304.2	1303.2
20°	1269.3	1265.2	1264.2	1260.1	1262.1
22.5°	1230.3	1219.0	1211.8	1203.6	1203.6
25°	1183.1	1165.7	1151.3	1136.9	1140.0
27.5°	1139.0	1116.4	1102.0	1092.8	1090.8
30°	1095.9	1072.3	1058.9	1047.7	1047.7
32.5°	1024.1	1007.6	990.2	983.0	982.0
35°	924.5	914.3	899.9	896.8	891.7
37.5°	812.7	809.6	797.3	796.3	791.1
40°	695.7	697.8	693.6	691.6	688.5
42.5°	578.7	589.0	586.9	585.9	583.9
45°	466.9	474.1	475.1	478.2	483.3
47.5°	367.3	369.4	371.5	370.4	371.5
50°	287.3	282.2	281.2	278.1	281.2
52.5°	231.9	223.7	219.6	215.5	213.4
55°	204.2	196.0	191.9	189.8	187.8
57.5°	197.0	188.8	182.6	178.5	177.5
60°	199.1	186.8	178.5	173.4	172.4
62.5°	204.2	187.8	176.5	171.4	170.3
65°	203.2	185.7	175.5	169.3	168.3
66°	200.1	183.7	173.4	168.3	167.3
67.5°	195.0	180.6	171.4	167.3	165.2
70°	185.7	176.5	169.3	164.2	162.1
72.5°	177.5	170.3	164.2	159.0	158.0
75°	168.3	162.1	156.0	151.9	150.8
77.5°	157.0	150.8	146.7	143.7	142.6
80°	138.5	134.4	130.3	126.2	126.2
82.5°	114.9	111.8	107.7	104.7	103.6
85°	88.2	88.2	85.2	82.1	81.1
87.5°	52.3	51.3	51.3	48.2	48.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)