

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: P155600

Luminaire Tested: **TLM-E04-LED-E1-T3**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P155600  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33672)  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: TLM-E04-LED-E1-T3  
Description: TALON MEDIUM LED SITE LUMINAIRE  
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3  
Light Source: (84) 4000K CCT, 70 CRI LEDs  
Ballast/Driver: -

**Summary**

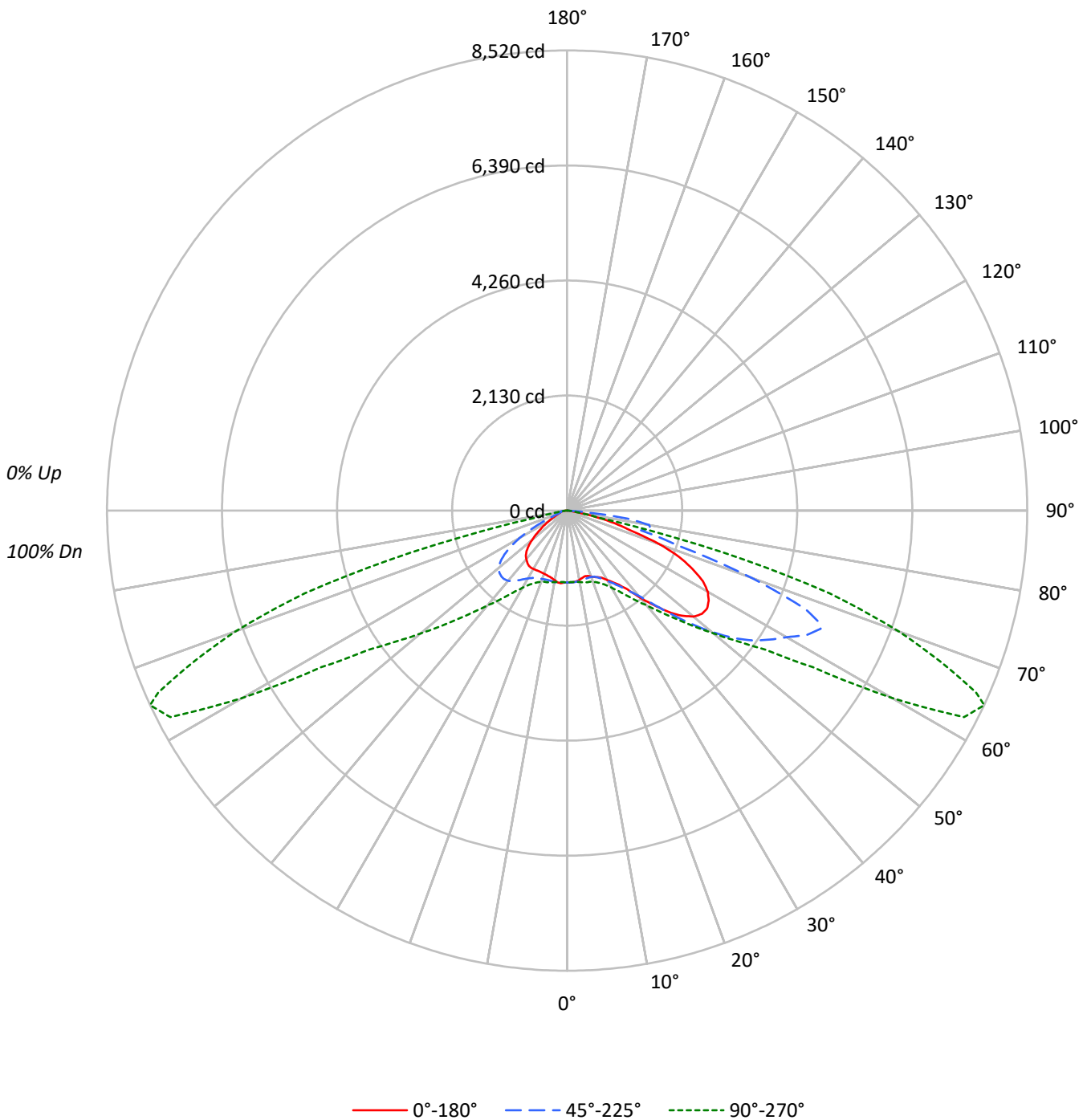
Lumens per Lamp: N/A  
Luminaire Lumens: 12335.7 lumens  
Efficiency: N/A  
Efficacy: 126.9 lumens/watt  
Spacing Criteria (0/90/45): 1.97 / 4.22 / 2.62  
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')  
CIE Type: Direct

Input Watts (W): 97.2  
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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CATALOG NUMBER: TLM-E04-LED-E1-T3

### 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	94	89	102	97	92	87	92	88	84	88	85	82	85	82	79	77
2	92	82	73	65	89	80	71	64	76	69	63	72	66	61	69	64	60	57
3	81	68	57	49	79	66	56	49	63	55	48	60	53	47	57	51	46	43
4	73	57	46	38	70	56	46	38	53	44	37	51	43	36	48	41	36	33
5	65	49	38	30	63	48	38	30	46	37	29	44	35	29	42	34	29	26
6	59	43	32	24	57	42	32	24	40	31	24	38	30	24	36	29	23	21
7	54	38	28	20	52	37	27	20	35	27	20	34	26	20	32	25	20	17
8	50	34	24	17	48	33	24	17	32	23	17	30	23	17	29	22	17	14
9	46	31	21	15	45	30	21	15	29	20	15	28	20	15	27	20	14	12
10	43	28	19	13	42	27	19	13	26	18	13	25	18	13	24	18	13	11

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

	0°	90°	180°
0°	21356	21356	21356
5°	21438	21417	21760
10°	21251	21904	21382
15°	20935	22864	21068
20°	22226	24004	21268
25°	24108	26329	21933
30°	27479	30622	23176
35°	32949	37552	24372
40°	44125	48068	24663
45°	60283	64009	24145
50°	76280	88377	21227
55°	88622	125818	16881
60°	96564	222517	12811
65°	97469	323882	9682
70°	85429	306763	8079
75°	56443	185640	8274
80°	20604	18874	9742
85°	3447	12535	10820



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.3	1.0
10°-20°	375.8	3.0
20°-30°	645.8	5.2
30°-40°	1048.6	8.5
40°-50°	1750.6	14.2
50°-60°	2756.6	22.3
60°-70°	3759.0	30.5
70°-80°	1627.2	13.2
80°-90°	244.7	2.0
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°	1148.9	9.3
0°-40°	2197.5	17.8
0°-60°	6704.8	54.4
0°-90°	12335.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12335.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1329	1329	1329	1329	1329	
5°	1329	1332	1328	1344	1349	126
15°	1259	1311	1375	1335	1267	362
25°	1360	1368	1485	1379	1237	637
35°	1680	1717	1915	1576	1243	1088
45°	2653	2688	2817	1724	1063	2040
55°	3164	4191	4492	1420	603	2791
65°	2564	5180	8520	499	255	2490
75°	909	1416	2991	135	133	972
85°	19	315	68	93	59	49
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°	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3
2.5°	1334.7	1340.0	1334.7	1336.0	1337.3	1336.0	1334.7	1334.7	1330.7	1333.3	1336.0
5°	1329.3	1333.3	1332.0	1333.3	1334.7	1333.3	1332.0	1333.3	1330.7	1332.0	1336.0
7.5°	1322.7	1321.3	1322.7	1325.3	1328.0	1328.0	1328.0	1329.3	1328.0	1328.0	1332.0
10°	1302.7	1304.0	1306.7	1310.7	1312.0	1316.0	1316.0	1320.0	1321.3	1324.0	1329.3
12.5°	1277.3	1278.7	1281.3	1284.0	1290.7	1297.3	1297.3	1306.7	1310.7	1317.3	1326.7
15°	1258.7	1260.0	1262.7	1265.3	1270.7	1277.3	1281.3	1292.0	1298.7	1310.7	1324.0
17.5°	1269.3	1268.0	1270.7	1272.0	1272.0	1277.3	1277.3	1285.3	1293.3	1304.0	1321.3
20°	1300.0	1300.0	1302.7	1302.7	1301.3	1304.0	1298.7	1298.7	1300.0	1305.3	1317.3
22.5°	1330.7	1329.3	1334.7	1337.3	1338.7	1342.7	1337.3	1336.0	1329.3	1325.3	1329.3
25°	1360.0	1358.7	1365.3	1369.3	1376.0	1380.0	1380.0	1380.0	1374.7	1368.0	1364.0
27.5°	1405.3	1405.3	1412.0	1416.0	1421.3	1429.3	1433.3	1433.3	1434.7	1425.3	1418.7
30°	1481.3	1482.7	1484.0	1489.3	1494.7	1497.3	1502.7	1506.7	1510.7	1505.3	1494.7
32.5°	1572.0	1564.0	1564.0	1572.0	1578.7	1586.7	1589.3	1594.7	1602.7	1598.7	1597.3
35°	1680.0	1677.3	1674.7	1677.3	1685.3	1694.7	1705.3	1714.7	1709.3	1717.3	1713.3
37.5°	1840.0	1842.7	1844.0	1844.0	1842.7	1845.3	1850.7	1860.0	1857.3	1860.0	1865.3
40°	2104.0	2094.7	2085.3	2086.7	2073.3	2076.0	2054.7	2064.0	2065.3	2056.0	2060.0
42.5°	2368.0	2373.3	2377.3	2388.0	2378.7	2373.3	2353.3	2353.3	2342.7	2333.3	2330.7
45°	2653.3	2664.0	2665.3	2686.7	2678.7	2696.0	2710.7	2706.7	2689.3	2688.0	2669.3
47.5°	2881.3	2898.7	2917.3	2942.7	2962.7	3001.3	3046.7	3069.3	3082.7	3093.3	3072.0
50°	3052.0	3060.0	3108.0	3148.0	3192.0	3256.0	3318.7	3400.0	3465.3	3496.0	3525.3
52.5°	3144.0	3164.0	3216.0	3278.7	3356.0	3452.0	3553.3	3682.7	3794.7	3869.3	3936.0
55°	3164.0	3184.0	3242.7	3322.7	3428.0	3557.3	3702.7	3878.7	4046.7	4190.7	4330.7
57.5°	3108.0	3130.7	3193.3	3285.3	3409.3	3566.7	3749.3	3980.0	4212.0	4445.3	4652.0
60°	3005.3	3033.3	3090.7	3181.3	3318.7	3496.0	3714.7	4004.0	4329.3	4686.7	5082.7
62.5°	2836.0	2865.3	2918.7	3018.7	3160.0	3356.0	3609.3	3969.3	4429.3	4992.0	5694.7
65°	2564.0	2577.3	2642.7	2744.0	2869.3	3085.3	3364.0	3798.7	4397.3	5180.0	6148.0
66°	2441.3	2464.0	2504.0	2585.3	2705.3	2908.0	3188.0	3629.3	4276.0	5114.7	6136.0
67.5°	2249.3	2266.7	2293.3	2348.0	2421.3	2570.7	2836.0	3253.3	3905.3	4784.0	5881.3
70°	1818.7	1826.7	1862.7	1881.3	1906.7	1956.0	2052.0	2292.0	2800.0	3625.3	4746.7
72.5°	1240.0	1262.7	1301.3	1354.7	1424.0	1490.7	1536.0	1566.7	1676.0	2162.7	3162.7
75°	909.3	933.3	982.7	1053.3	1174.7	1313.3	1457.3	1524.0	1478.7	1416.0	1761.3
77.5°	528.0	560.0	601.3	669.3	781.3	965.3	1212.0	1430.7	1578.7	1588.0	1508.0
80°	222.7	226.7	252.0	286.7	356.0	485.3	677.3	992.0	1320.0	1541.3	1593.3
82.5°	50.7	62.7	80.0	94.7	116.0	160.0	237.3	394.7	713.3	1118.7	1458.7
85°	18.7	18.7	25.3	37.3	42.7	48.0	62.7	100.0	170.7	314.7	656.0
87.5°	0.0	1.3	2.7	2.7	5.3	6.7	10.7	14.7	13.3	12.0	40.0
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):**

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3
2.5°	1333.3	1332.0	1329.3	1329.3	1329.3	1329.3	1326.7	1328.0	1325.3	1326.7	1326.7
5°	1332.0	1332.0	1330.7	1328.0	1329.3	1329.3	1330.7	1328.0	1328.0	1329.3	1328.0
7.5°	1332.0	1330.7	1330.7	1330.7	1332.0	1330.7	1332.0	1332.0	1332.0	1333.3	1333.3
10°	1332.0	1332.0	1334.7	1336.0	1336.0	1337.3	1341.3	1341.3	1342.7	1344.0	1346.7
12.5°	1333.3	1338.7	1342.7	1346.7	1348.0	1350.7	1357.3	1357.3	1360.0	1364.0	1365.3
15°	1334.7	1342.7	1350.7	1353.3	1356.0	1361.3	1368.0	1370.7	1374.7	1378.7	1381.3
17.5°	1333.3	1344.0	1353.3	1357.3	1361.3	1368.0	1376.0	1378.7	1384.0	1389.3	1394.7
20°	1332.0	1346.7	1361.3	1366.7	1372.0	1381.3	1392.0	1398.7	1404.0	1412.0	1417.3
22.5°	1340.0	1357.3	1377.3	1385.3	1394.7	1406.7	1421.3	1429.3	1436.0	1444.0	1448.0
25°	1365.3	1378.7	1402.7	1416.0	1428.0	1448.0	1468.0	1477.3	1485.3	1492.0	1493.3
27.5°	1408.0	1412.0	1441.3	1458.7	1476.0	1508.0	1532.0	1538.7	1553.3	1558.7	1557.3
30°	1477.3	1470.7	1494.7	1521.3	1546.7	1590.7	1620.0	1637.3	1650.7	1650.7	1640.0
32.5°	1577.3	1566.7	1573.3	1604.0	1633.3	1697.3	1732.0	1754.7	1764.0	1761.3	1738.7
35°	1708.0	1701.3	1697.3	1721.3	1768.0	1842.7	1888.0	1900.0	1914.7	1912.0	1882.7
37.5°	1862.7	1857.3	1857.3	1885.3	1930.7	2041.3	2090.7	2098.7	2097.3	2076.0	2021.3
40°	2045.3	2042.7	2030.7	2046.7	2085.3	2229.3	2296.0	2306.7	2292.0	2257.3	2193.3
42.5°	2308.0	2292.0	2254.7	2264.0	2293.3	2433.3	2520.0	2549.3	2534.7	2500.0	2396.0
45°	2650.7	2633.3	2570.7	2562.7	2578.7	2701.3	2813.3	2820.0	2817.3	2773.3	2650.7
47.5°	3053.3	3026.7	2960.0	2938.7	2933.3	3046.7	3154.7	3165.3	3158.7	3093.3	2929.3
50°	3489.3	3450.7	3406.7	3392.0	3370.7	3452.0	3561.3	3562.7	3536.0	3445.3	3292.0
52.5°	3954.7	3941.3	3933.3	3918.7	3909.3	3980.0	4046.7	4006.7	3966.7	3872.0	3738.7
55°	4424.0	4478.7	4534.7	4540.0	4556.0	4632.0	4630.7	4521.3	4492.0	4440.0	4308.0
57.5°	4922.7	5125.3	5301.3	5356.0	5409.3	5550.7	5537.3	5429.3	5392.0	5328.0	5218.7
60°	5601.3	6148.0	6656.0	6777.3	6861.3	7030.7	7014.7	6848.0	6925.3	6920.0	6778.7
62.5°	6552.0	7461.3	8222.7	8409.3	8468.0	8486.7	8385.3	8205.3	8281.3	8366.7	7932.0
65°	7196.0	8265.3	9046.7	9190.7	9198.7	8976.0	8750.7	8538.7	8520.0	8446.7	7825.3
66°	7210.7	8305.3	9089.3	9229.3	9180.0	8876.0	8590.7	8377.3	8285.3	8124.0	7480.0
67.5°	6952.0	8056.0	8900.0	9048.0	8940.0	8509.3	8116.0	7841.3	7661.3	7400.0	6832.0
70°	5838.7	6933.3	7973.3	8249.3	8284.0	7641.3	7096.0	6773.3	6530.7	6172.0	5682.7
72.5°	4341.3	5330.7	6248.0	6512.0	6646.7	6133.3	5673.3	5428.0	5096.0	4718.7	4370.7
75°	2721.3	3420.0	4034.7	4220.0	4093.3	3696.0	3420.0	3317.3	2990.7	2765.3	2606.7
77.5°	1556.0	1774.7	1824.0	1753.3	1604.0	1228.0	873.3	646.7	561.3	621.3	685.3
80°	1518.7	1392.0	1109.3	976.0	884.0	608.0	357.3	245.3	204.0	209.3	226.7
82.5°	1645.3	1765.3	1453.3	1185.3	994.7	672.0	370.7	197.3	133.3	157.3	177.3
85°	1069.3	1488.0	1340.0	1129.3	914.7	574.7	305.3	102.7	68.0	89.3	122.7
87.5°	108.0	118.7	101.3	137.3	102.7	48.0	24.0	14.7	13.3	16.0	24.0
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):**

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3	1329.3
2.5°	1328.0	1328.0	1329.3	1330.7	1332.0	1333.3	1333.3	1333.3	1333.3	1336.0	1334.7
5°	1330.7	1333.3	1336.0	1337.3	1340.0	1340.0	1344.0	1342.7	1342.7	1346.7	1348.0
7.5°	1336.0	1340.0	1345.3	1344.0	1349.3	1348.0	1350.7	1350.7	1346.7	1348.0	1345.3
10°	1348.0	1353.3	1356.0	1352.0	1353.3	1348.0	1346.7	1340.0	1332.0	1328.0	1322.7
12.5°	1368.0	1373.3	1373.3	1366.7	1358.7	1346.7	1337.3	1322.7	1310.7	1304.0	1297.3
15°	1385.3	1390.7	1389.3	1378.7	1366.7	1348.0	1334.7	1317.3	1300.0	1289.3	1282.7
17.5°	1398.7	1401.3	1397.3	1382.7	1369.3	1352.0	1338.7	1320.0	1300.0	1286.7	1274.7
20°	1418.7	1416.0	1406.7	1388.0	1373.3	1357.3	1346.7	1330.7	1308.0	1290.7	1273.3
22.5°	1448.0	1437.3	1420.0	1400.0	1385.3	1370.7	1360.0	1342.7	1320.0	1298.7	1278.7
25°	1486.7	1465.3	1441.3	1420.0	1406.7	1390.7	1378.7	1360.0	1336.0	1312.0	1288.0
27.5°	1542.7	1505.3	1474.7	1456.0	1441.3	1421.3	1406.7	1382.7	1357.3	1329.3	1302.7
30°	1605.3	1554.7	1525.3	1510.7	1494.7	1473.3	1450.7	1420.0	1390.7	1360.0	1328.0
32.5°	1686.7	1625.3	1597.3	1582.7	1561.3	1534.7	1508.0	1473.3	1432.0	1392.0	1353.3
35°	1793.3	1730.7	1701.3	1678.7	1649.3	1614.7	1576.0	1529.3	1473.3	1420.0	1370.7
37.5°	1908.0	1840.0	1812.0	1788.0	1744.0	1698.7	1644.0	1576.0	1500.0	1429.3	1368.0
40°	2053.3	1990.7	1954.7	1913.3	1861.3	1782.7	1697.3	1598.7	1501.3	1414.7	1342.7
42.5°	2237.3	2174.7	2121.3	2056.0	1965.3	1844.0	1722.7	1594.7	1477.3	1378.7	1301.3
45°	2481.3	2405.3	2313.3	2198.7	2052.0	1882.7	1724.0	1569.3	1432.0	1322.7	1240.0
47.5°	2780.0	2664.0	2513.3	2320.0	2109.3	1893.3	1702.7	1518.7	1361.3	1242.7	1150.7
50°	3134.7	2952.0	2704.0	2420.0	2138.7	1877.3	1649.3	1442.7	1261.3	1134.7	1025.3
52.5°	3540.0	3241.3	2876.0	2492.0	2137.3	1824.0	1558.7	1328.0	1130.7	989.3	885.3
55°	4016.0	3572.0	3053.3	2545.3	2100.0	1725.3	1420.0	1166.7	969.3	838.7	742.7
57.5°	4713.3	4108.0	3362.7	2628.0	2025.3	1573.3	1232.0	973.3	800.0	676.0	594.7
60°	5988.0	5002.7	3920.0	2794.7	1910.7	1350.7	1012.0	766.7	621.3	521.3	466.7
62.5°	6948.0	5694.7	4221.3	2757.3	1680.0	1076.0	750.7	558.7	457.3	389.3	354.7
65°	6810.7	5480.0	3900.0	2374.7	1317.3	758.7	498.7	380.0	314.7	282.7	262.7
66°	6500.0	5200.0	3621.3	2137.3	1138.7	630.7	410.7	318.7	270.7	248.0	234.7
67.5°	5910.7	4680.0	3122.7	1752.0	874.7	457.3	309.3	252.0	220.0	210.7	201.3
70°	4913.3	3732.0	2192.0	1020.0	446.7	254.7	196.0	176.0	168.0	166.7	164.0
72.5°	3765.3	2641.3	1290.7	482.7	232.0	169.3	152.0	145.3	142.7	142.7	144.0
75°	2308.0	1484.0	570.7	236.0	162.7	142.7	134.7	132.0	130.7	132.0	130.7
77.5°	770.7	472.0	244.0	178.7	148.0	132.0	126.7	124.0	124.0	124.0	124.0
80°	236.0	205.3	186.7	165.3	140.0	125.3	117.3	116.0	117.3	118.7	114.7
82.5°	177.3	168.0	157.3	146.7	126.7	112.0	109.3	109.3	109.3	105.3	100.0
85°	130.7	129.3	106.7	100.0	93.3	93.3	93.3	93.3	89.3	82.7	77.3
87.5°	24.0	22.7	24.0	25.3	37.3	40.0	40.0	42.7	46.7	44.0	44.0
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: P155600

CATALOG NUMBER: TLM-E04-LED-E1-T3

**CANDELA DISTRIBUTION (continued):**

	160°	165°	170°	175°	180°
0°	1329.3	1329.3	1329.3	1329.3	1329.3
2.5°	1334.7	1333.3	1337.3	1334.7	1336.0
5°	1346.7	1345.3	1348.0	1345.3	1349.3
7.5°	1342.7	1340.0	1338.7	1340.0	1341.3
10°	1314.7	1312.0	1310.7	1309.3	1310.7
12.5°	1290.7	1285.3	1285.3	1282.7	1284.0
15°	1273.3	1269.3	1268.0	1265.3	1266.7
17.5°	1265.3	1258.7	1256.0	1253.3	1253.3
20°	1260.0	1252.0	1248.0	1245.3	1244.0
22.5°	1260.0	1248.0	1242.7	1240.0	1238.7
25°	1265.3	1250.7	1242.7	1238.7	1237.3
27.5°	1276.0	1257.3	1248.0	1242.7	1242.7
30°	1294.7	1270.7	1257.3	1250.7	1249.3
32.5°	1313.3	1281.3	1262.7	1254.7	1252.0
35°	1322.7	1281.3	1258.7	1245.3	1242.7
37.5°	1312.0	1264.0	1236.0	1216.0	1212.0
40°	1278.7	1228.0	1197.3	1178.7	1176.0
42.5°	1234.7	1185.3	1149.3	1136.0	1132.0
45°	1174.7	1116.0	1080.0	1061.3	1062.7
47.5°	1072.0	1012.0	980.0	962.7	965.3
50°	950.7	892.0	864.0	845.3	849.3
52.5°	817.3	764.0	737.3	728.0	725.3
55°	677.3	636.0	617.3	606.7	602.7
57.5°	549.3	520.0	506.7	493.3	494.7
60°	433.3	418.7	414.7	400.0	398.7
62.5°	341.3	332.0	328.0	317.3	318.7
65°	258.7	256.0	258.7	252.0	254.7
66°	233.3	234.7	234.7	230.7	233.3
67.5°	201.3	204.0	208.0	204.0	206.7
70°	166.7	169.3	172.0	172.0	172.0
72.5°	145.3	148.0	149.3	149.3	149.3
75°	133.3	134.7	136.0	133.3	133.3
77.5°	125.3	125.3	122.7	121.3	120.0
80°	113.3	112.0	108.0	105.3	105.3
82.5°	94.7	92.0	89.3	85.3	85.3
85°	72.0	69.3	66.7	61.3	58.7
87.5°	37.3	38.7	37.3	30.7	26.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)