

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: P156638

Luminaire Tested: **TLM-E04-LED-E1-T4-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P156638
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-E04-LED-E1-T4-8030
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (84) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10202.3 lumens
Efficiency: N/A
Efficacy: 105.0 lumens/watt
Spacing Criteria (0/90/45): 1.73 / 2.02 / 2.64
Luminous Opening: Rectangular (W 0.67' x L: 1' x H: 0')
CIE Type: Direct

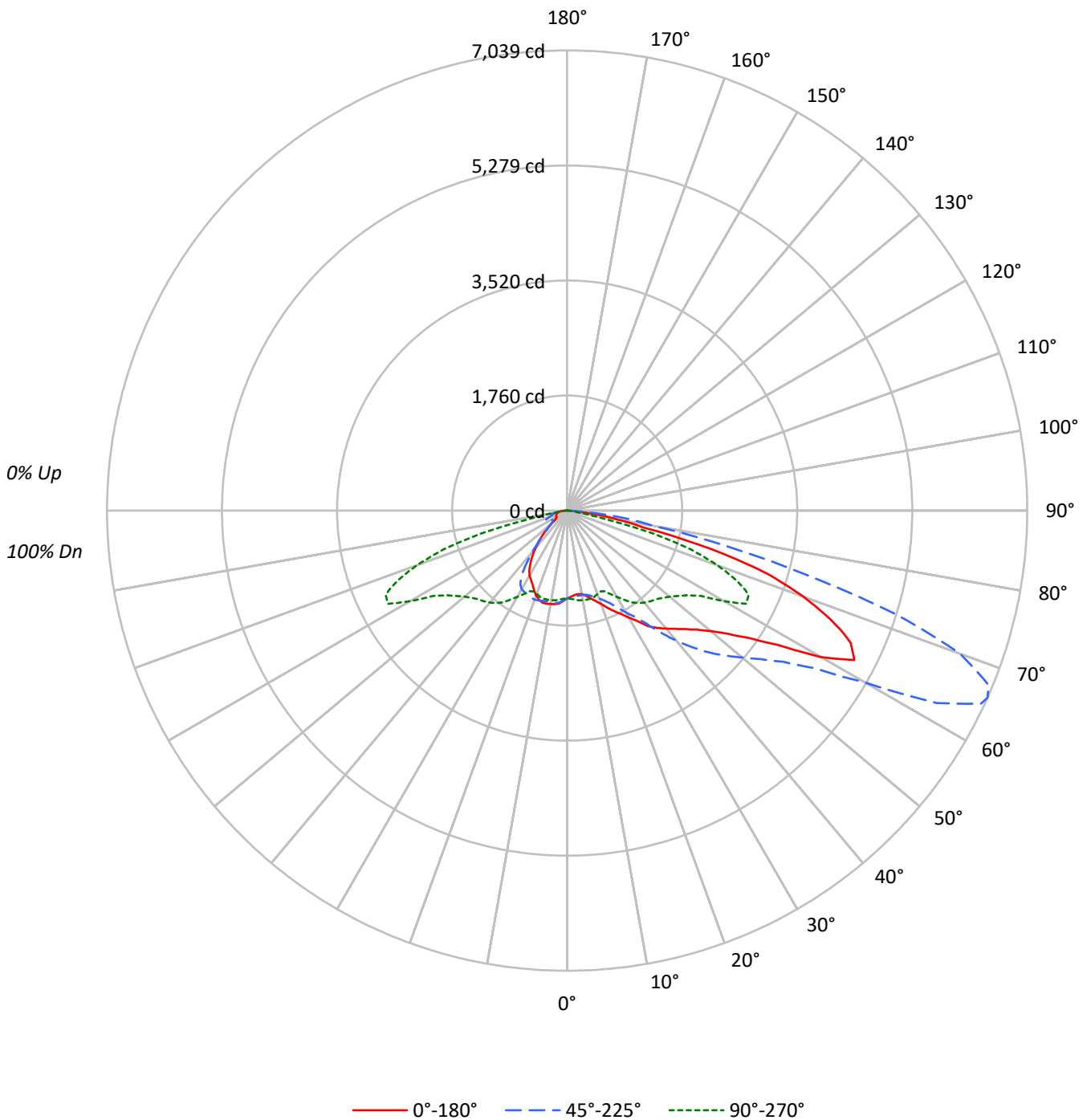
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	21605	21605	21605
5°	20907	22068	23011
10°	21149	22726	23663
15°	23170	23190	24275
20°	25973	23241	23663
25°	30062	24157	22162
30°	35070	28286	21315
35°	42308	33590	19179
40°	49442	38563	15836
45°	58268	43643	12042
50°	71637	51189	7706
55°	95282	63164	5767
60°	143873	89019	6076
65°	181937	116358	7017
70°	180459	114970	8352
75°	143127	85151	10267
80°	72562	17911	12804
85°	10581	14728	16387



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.6	1.3
10°-20°	396.5	3.9
20°-30°	682.9	6.7
30°-40°	1033.2	10.1
40°-50°	1339.1	13.1
50°-60°	1846.3	18.1
60°-70°	2868.5	28.1
70°-80°	1668.1	16.3
80°-90°	237.2	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°	1210.0	11.9
0°-40°	2243.1	22.0
0°-60°	5428.6	53.2
0°-90°	10202.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10202.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1345	1345	1345	1345	1345	
5°	1296	1316	1368	1413	1427	124
15°	1393	1345	1394	1430	1460	399
25°	1696	1568	1363	1425	1250	791
35°	2157	2108	1713	1209	978	1348
45°	2565	3070	1921	506	530	2004
55°	3402	4030	2255	261	206	3151
65°	4786	6987	3061	369	185	4529
75°	2306	3756	1372	232	165	2375
85°	57	392	80	94	89	248
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°	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8
2.5°	1320.0	1324.5	1321.1	1322.3	1322.3	1323.4	1323.4	1324.5	1323.4	1326.8	1329.0
5°	1296.4	1298.6	1297.5	1299.7	1302.0	1306.5	1305.4	1311.0	1312.1	1315.5	1321.1
7.5°	1287.4	1285.1	1286.2	1289.6	1291.9	1294.1	1296.4	1300.9	1304.2	1312.1	1316.6
10°	1296.4	1295.2	1296.4	1298.6	1298.6	1299.7	1297.5	1302.0	1304.2	1311.0	1315.5
12.5°	1333.5	1333.5	1331.3	1331.3	1329.0	1326.8	1321.1	1317.8	1316.6	1317.8	1320.0
15°	1393.1	1390.9	1386.4	1383.0	1378.5	1370.6	1362.8	1356.0	1351.5	1344.8	1342.5
17.5°	1451.7	1448.3	1443.8	1439.3	1433.7	1425.8	1413.4	1405.5	1393.1	1385.3	1380.8
20°	1519.2	1512.4	1506.8	1501.2	1489.9	1487.7	1475.3	1461.8	1447.2	1429.2	1426.9
22.5°	1607.0	1595.7	1589.0	1585.6	1574.3	1570.9	1550.7	1531.6	1513.6	1489.9	1484.3
25°	1695.9	1684.6	1681.2	1676.7	1668.9	1664.4	1645.2	1623.8	1600.2	1567.6	1560.8
27.5°	1782.5	1783.6	1774.6	1778.0	1775.8	1767.9	1748.7	1727.4	1709.4	1671.1	1663.2
30°	1890.5	1883.8	1879.3	1886.0	1878.2	1879.3	1862.4	1851.2	1821.9	1799.4	1783.6
32.5°	2003.1	2001.9	2008.7	2013.2	2012.1	2009.8	1996.3	1985.1	1959.2	1926.5	1919.8
35°	2157.2	2164.0	2169.6	2189.9	2189.9	2204.5	2191.0	2177.5	2147.1	2107.7	2094.2
37.5°	2261.9	2264.1	2286.7	2313.7	2347.4	2378.9	2387.9	2391.3	2378.9	2349.7	2329.4
40°	2357.5	2362.0	2398.1	2439.7	2489.2	2551.1	2588.2	2605.1	2608.5	2595.0	2551.1
42.5°	2453.2	2460.0	2497.1	2557.9	2626.5	2705.3	2770.5	2812.2	2835.8	2835.8	2809.9
45°	2564.6	2573.6	2614.1	2680.5	2760.4	2859.4	2949.5	3029.4	3067.6	3069.9	3045.1
47.5°	2696.3	2704.1	2751.4	2818.9	2901.1	3001.2	3114.9	3206.0	3276.9	3281.4	3261.2
50°	2866.2	2877.4	2916.8	2977.6	3062.0	3163.3	3276.9	3404.1	3478.4	3496.4	3475.0
52.5°	3091.3	3093.5	3126.1	3182.4	3264.6	3361.3	3481.7	3620.2	3718.1	3732.7	3697.8
55°	3401.8	3398.5	3419.9	3480.6	3542.5	3617.9	3742.8	3898.1	4007.3	4029.8	3993.8
57.5°	3823.8	3820.5	3838.5	3853.1	3969.0	4042.2	4164.8	4313.4	4419.1	4484.4	4422.5
60°	4477.7	4474.3	4503.5	4589.1	4675.7	4782.6	4901.9	5079.7	5228.2	5247.4	5186.6
62.5°	4951.4	4968.3	5032.4	5132.6	5308.1	5517.5	5735.8	5969.8	6274.8	6371.6	6342.3
65°	4786.0	4819.8	4908.7	5060.6	5294.6	5583.8	5925.9	6350.2	6758.7	6987.1	6980.4
66°	4637.4	4674.6	4783.7	4930.0	5177.6	5493.8	5867.4	6329.9	6786.8	7038.9	7054.6
67.5°	4367.4	4409.0	4515.9	4689.2	4930.0	5266.5	5668.2	6171.3	6687.8	6981.5	7023.1
70°	3841.8	3889.1	3966.8	4109.7	4347.1	4647.6	5070.7	5520.8	6062.1	6398.6	6449.2
72.5°	3211.7	3253.3	3340.0	3457.0	3651.7	3840.7	4172.7	4504.7	4891.8	5275.5	5238.4
75°	2305.8	2323.8	2375.6	2502.7	2607.4	2777.3	3044.0	3316.3	3580.8	3756.3	3781.1
77.5°	1198.5	1245.7	1318.9	1459.5	1573.2	1726.2	1899.5	2104.4	2297.9	2458.8	2414.9
80°	784.3	804.6	869.9	941.9	1025.2	1123.1	1239.0	1315.5	1340.3	1330.1	1340.3
82.5°	452.4	489.5	576.2	631.3	693.2	727.0	819.2	907.0	956.5	894.6	872.1
85°	57.4	74.3	234.1	294.8	337.6	388.2	416.4	469.3	437.7	391.6	477.1
87.5°	12.4	11.3	15.8	33.8	34.9	29.3	55.1	58.5	36.0	18.0	22.5
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°	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8
2.5°	1331.3	1332.4	1334.6	1338.0	1340.3	1342.5	1344.8	1348.1	1350.4	1352.6	1357.1
5°	1325.6	1330.1	1334.6	1339.1	1344.8	1353.8	1359.4	1363.9	1368.4	1377.4	1380.8
7.5°	1322.3	1330.1	1336.9	1344.8	1353.8	1361.6	1371.8	1377.4	1384.1	1389.8	1396.5
10°	1320.0	1331.3	1338.0	1349.3	1359.4	1367.3	1378.5	1385.3	1393.1	1399.9	1403.3
12.5°	1324.5	1330.1	1336.9	1348.1	1360.5	1371.8	1384.1	1389.8	1396.5	1402.2	1403.3
15°	1343.6	1343.6	1344.8	1353.8	1366.1	1375.1	1385.3	1390.9	1394.3	1397.6	1397.6
17.5°	1378.5	1370.6	1365.0	1366.1	1374.0	1379.6	1385.3	1385.3	1383.0	1381.9	1379.6
20°	1419.0	1408.9	1397.6	1389.8	1387.5	1383.0	1379.6	1368.4	1359.4	1351.5	1345.9
22.5°	1477.5	1461.8	1446.0	1431.4	1417.9	1401.0	1381.9	1359.4	1338.0	1323.4	1314.4
25°	1549.6	1537.2	1518.1	1495.6	1478.7	1447.2	1422.4	1389.8	1362.8	1343.6	1327.9
27.5°	1652.0	1637.3	1619.3	1599.1	1574.3	1539.4	1509.1	1470.8	1438.2	1410.0	1389.8
30°	1779.1	1760.0	1746.5	1721.7	1704.9	1665.5	1635.1	1587.8	1524.8	1479.8	1451.7
32.5°	1909.7	1888.3	1877.0	1857.9	1838.8	1815.1	1769.0	1695.9	1614.8	1541.7	1493.3
35°	2084.1	2061.6	2041.3	2024.5	1996.3	1952.4	1911.9	1824.1	1712.7	1610.3	1529.3
37.5°	2303.5	2266.4	2215.8	2173.0	2123.5	2060.5	1998.6	1908.5	1781.4	1648.6	1540.6
40°	2537.6	2472.3	2400.3	2320.4	2234.9	2143.7	2072.8	1981.7	1838.8	1681.2	1532.7
42.5°	2781.8	2678.3	2578.1	2465.6	2346.3	2238.3	2146.0	2045.8	1881.5	1690.2	1501.2
45°	3023.7	2907.8	2755.9	2608.5	2457.7	2323.8	2220.3	2107.7	1920.9	1693.6	1459.5
47.5°	3224.0	3104.8	2931.5	2746.9	2568.0	2416.1	2294.5	2173.0	1973.8	1717.2	1449.4
50°	3435.6	3290.4	3098.0	2879.7	2677.1	2507.2	2377.8	2251.8	2048.1	1778.0	1482.0
52.5°	3666.3	3499.7	3274.7	3030.5	2808.8	2618.6	2478.0	2348.5	2142.6	1863.5	1543.9
55°	3947.6	3743.9	3499.7	3224.0	2986.6	2776.2	2620.9	2467.8	2255.1	1964.8	1621.6
57.5°	4377.5	4127.7	3853.1	3539.1	3275.8	3027.1	2841.4	2664.8	2429.6	2115.6	1727.4
60°	5155.1	4888.4	4531.7	4151.3	3841.8	3551.5	3279.2	3059.7	2770.5	2412.7	1961.4
62.5°	6269.2	5914.7	5438.7	4906.4	4501.3	4082.7	3775.5	3449.1	3090.1	2704.1	2237.1
65°	6888.1	6458.2	5821.3	5203.5	4682.5	4227.8	3837.3	3459.2	3060.9	2691.8	2301.3
66°	6964.6	6516.7	5855.0	5204.6	4657.7	4190.7	3780.0	3388.3	2981.0	2628.8	2274.3
67.5°	6933.1	6475.1	5793.2	5106.7	4550.8	4048.9	3624.7	3218.4	2812.2	2483.6	2184.2
70°	6416.6	5982.2	5312.6	4647.6	4119.8	3624.7	3219.5	2820.1	2447.6	2166.2	1945.7
72.5°	5328.4	4957.0	4375.2	3853.1	3439.0	3030.5	2687.3	2305.8	1990.7	1782.5	1652.0
75°	3846.3	3621.3	3091.3	2791.9	2428.4	2157.2	1824.1	1598.0	1371.8	1270.5	1248.0
77.5°	2429.6	2126.9	1790.4	1474.2	1212.0	1004.9	782.1	663.9	553.7	542.4	654.9
80°	1230.0	1107.3	853.0	679.7	571.7	462.5	365.7	276.8	193.6	232.9	279.1
82.5°	805.7	671.8	526.7	433.2	377.0	312.8	243.1	168.8	123.8	139.5	191.3
85°	435.5	371.4	299.3	236.3	191.3	171.0	114.8	81.0	79.9	85.5	109.2
87.5°	31.5	31.5	24.8	22.5	27.0	22.5	20.3	20.3	19.1	20.3	27.0
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°	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8	1344.8
2.5°	1359.4	1362.8	1363.9	1369.5	1372.9	1375.1	1377.4	1377.4	1378.5	1381.9	1383.0
5°	1385.3	1390.9	1397.6	1402.2	1404.4	1411.2	1413.4	1413.4	1415.7	1420.2	1423.5
7.5°	1401.0	1408.9	1415.7	1417.9	1422.4	1424.7	1428.0	1430.3	1430.3	1434.8	1437.0
10°	1406.7	1411.2	1417.9	1417.9	1422.4	1422.4	1425.8	1426.9	1426.9	1431.4	1434.8
12.5°	1406.7	1408.9	1414.5	1414.5	1417.9	1419.0	1423.5	1426.9	1428.0	1433.7	1438.2
15°	1399.9	1402.2	1406.7	1407.8	1415.7	1420.2	1430.3	1437.0	1437.0	1442.7	1444.9
17.5°	1380.8	1386.4	1395.4	1404.4	1419.0	1429.2	1441.5	1447.2	1442.7	1439.3	1435.9
20°	1349.3	1359.4	1380.8	1403.3	1429.2	1442.7	1449.4	1443.8	1428.0	1412.3	1402.2
22.5°	1317.8	1338.0	1374.0	1407.8	1437.0	1446.0	1442.7	1422.4	1396.5	1377.4	1363.9
25°	1332.4	1356.0	1390.9	1421.3	1440.4	1438.2	1424.7	1396.5	1368.4	1343.6	1321.1
27.5°	1393.1	1419.0	1438.2	1448.3	1446.0	1430.3	1408.9	1377.4	1343.6	1311.0	1279.5
30°	1450.5	1464.0	1468.5	1460.7	1442.7	1416.8	1389.8	1353.8	1308.7	1268.2	1232.2
32.5°	1476.4	1462.9	1441.5	1420.2	1390.9	1368.4	1331.3	1291.9	1235.6	1187.2	1151.2
35°	1476.4	1422.4	1368.4	1323.4	1279.5	1251.4	1208.6	1155.7	1103.9	1063.4	1035.3
37.5°	1443.8	1340.3	1251.4	1178.2	1123.1	1092.7	1028.5	981.3	937.4	923.9	905.9
40°	1384.1	1231.1	1102.8	1007.2	937.4	892.4	828.2	795.6	778.7	772.0	768.6
42.5°	1304.2	1109.6	938.5	820.4	745.0	694.3	651.6	631.3	630.2	629.1	629.1
45°	1218.7	979.0	778.7	638.1	571.7	526.7	506.4	498.5	505.3	504.1	505.3
47.5°	1165.8	880.0	632.4	482.8	432.1	402.9	392.7	396.1	401.7	399.5	399.5
50°	1159.1	829.4	534.5	375.9	337.6	323.0	320.7	320.7	324.1	321.8	320.7
52.5°	1183.8	821.5	483.9	323.0	292.6	280.2	278.0	276.8	275.7	269.0	263.3
55°	1226.6	839.5	469.3	309.5	278.0	264.5	261.1	258.8	254.3	245.3	235.2
57.5°	1312.1	895.8	482.8	316.2	282.5	271.2	267.8	267.8	258.8	244.2	229.6
60°	1518.1	1038.7	537.9	342.1	303.8	292.6	294.8	293.7	280.2	258.8	236.3
62.5°	1783.6	1225.5	609.9	378.1	330.8	328.6	339.8	337.6	315.1	282.5	249.8
65°	1906.3	1313.2	630.2	386.0	336.5	346.6	369.1	366.9	338.7	293.7	252.1
66°	1908.5	1313.2	621.2	379.2	328.6	341.0	363.5	362.4	334.2	289.2	247.6
67.5°	1862.4	1277.2	595.3	365.7	312.8	321.8	342.1	341.0	315.1	278.0	238.6
70°	1689.1	1143.3	528.9	342.1	291.5	287.0	293.7	289.2	272.3	246.4	219.4
72.5°	1447.2	959.9	461.4	324.1	276.8	258.8	254.3	250.9	237.4	222.8	205.9
75°	1140.0	759.6	405.1	310.6	263.3	239.7	231.8	227.3	218.3	208.2	194.7
77.5°	703.3	543.5	353.4	292.6	253.2	229.6	223.9	217.2	203.7	191.3	181.2
80°	314.0	336.5	290.3	255.4	226.2	204.8	195.8	185.7	172.2	164.3	158.7
82.5°	209.3	217.2	210.4	191.3	171.0	154.2	140.7	140.7	138.4	131.7	129.4
85°	133.9	135.0	130.5	118.2	110.3	100.2	94.5	95.7	100.2	99.0	97.9
87.5°	30.4	30.4	36.0	33.8	39.4	41.6	45.0	48.4	55.1	55.1	58.5
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: P156638

CATALOG NUMBER: TLM-E04-LED-E1-T4-8030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	1344.8	1344.8	1344.8	1344.8	1344.8
2.5°	1384.1	1386.4	1388.6	1385.3	1386.4
5°	1423.5	1422.4	1428.0	1424.7	1426.9
7.5°	1435.9	1437.0	1441.5	1441.5	1442.7
10°	1437.0	1439.3	1444.9	1448.3	1450.5
12.5°	1442.7	1447.2	1456.2	1458.4	1458.4
15°	1447.2	1449.4	1455.0	1457.3	1459.5
17.5°	1431.4	1426.9	1429.2	1430.3	1429.2
20°	1392.0	1387.5	1386.4	1381.9	1384.1
22.5°	1349.3	1336.9	1329.0	1320.0	1320.0
25°	1297.5	1278.4	1262.6	1246.9	1250.2
27.5°	1249.1	1224.3	1208.6	1198.5	1196.2
30°	1201.8	1176.0	1161.3	1149.0	1149.0
32.5°	1123.1	1105.1	1085.9	1078.1	1076.9
35°	1013.9	1002.7	986.9	983.5	977.9
37.5°	891.3	887.9	874.4	873.2	867.6
40°	763.0	765.2	760.7	758.5	755.1
42.5°	634.7	645.9	643.7	642.6	640.3
45°	512.0	519.9	521.0	524.4	530.0
47.5°	402.9	405.1	407.4	406.2	407.4
50°	315.1	309.5	308.3	305.0	308.3
52.5°	254.3	245.3	240.8	236.3	234.1
55°	223.9	214.9	210.4	208.2	205.9
57.5°	216.1	207.1	200.3	195.8	194.7
60°	218.3	204.8	195.8	190.2	189.1
62.5°	223.9	205.9	193.6	187.9	186.8
65°	222.8	203.7	192.4	185.7	184.6
66°	219.4	201.4	190.2	184.6	183.4
67.5°	213.8	198.1	187.9	183.4	181.2
70°	203.7	193.6	185.7	180.1	177.8
72.5°	194.7	186.8	180.1	174.4	173.3
75°	184.6	177.8	171.0	166.5	165.4
77.5°	172.2	165.4	160.9	157.5	156.4
80°	151.9	147.4	142.9	138.4	138.4
82.5°	126.0	122.7	118.2	114.8	113.7
85°	96.8	96.8	93.4	90.0	88.9
87.5°	57.4	56.3	56.3	52.9	52.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)