

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: P155602

Luminaire Tested: **TLM-E04-LED-E1-T3-7060**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P155602
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-T3-7060
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (84) 5700K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12657.7 lumens
Efficiency: N/A
Efficacy: 130.2 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

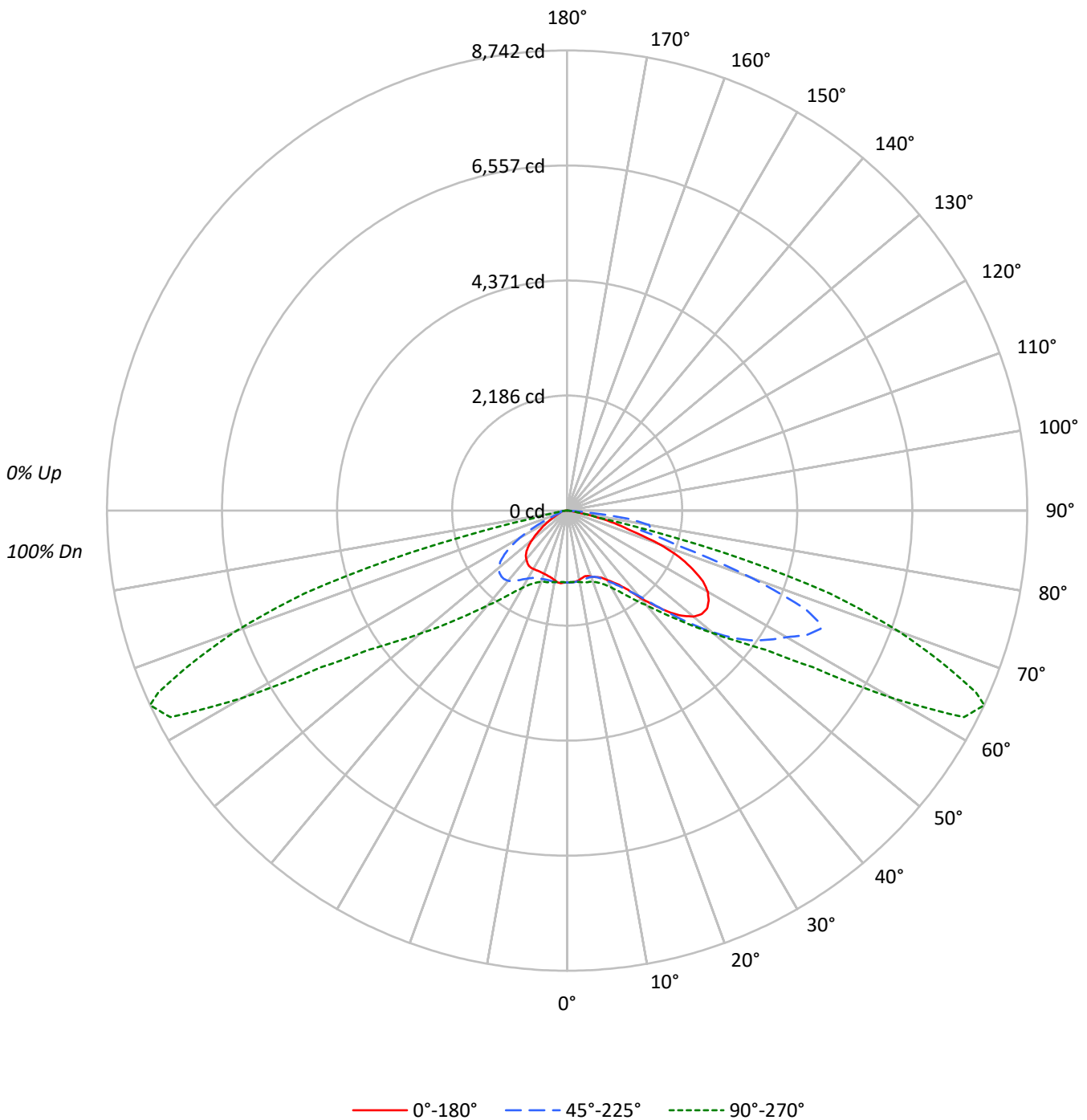
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	21913	21913	21913
5°	21997	21976	22329
10°	21806	22475	21940
15°	21481	23461	21617
20°	22805	24631	21824
25°	24737	27017	22505
30°	28197	31422	23780
35°	33810	38531	25008
40°	45277	49322	25307
45°	61858	65682	24774
50°	78272	90684	21782
55°	90935	129104	17321
60°	99086	228327	13145
65°	100012	332336	9933
70°	87655	314772	8291
75°	57920	190482	8492
80°	21140	19364	10001
85°	3539	12866	11097



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.7	1.0
10°-20°	385.6	3.0
20°-30°	662.7	5.2
30°-40°	1076.0	8.5
40°-50°	1796.3	14.2
50°-60°	2828.6	22.3
60°-70°	3857.1	30.5
70°-80°	1669.7	13.2
80°-90°	251.1	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°	1178.9	9.3
0°-40°	2254.9	17.8
0°-60°	6879.8	54.4
0°-90°	12657.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12657.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1364	1364	1364	1364	1364	
5°	1364	1367	1363	1379	1385	129
15°	1292	1345	1411	1370	1300	371
25°	1396	1404	1524	1415	1270	654
35°	1724	1762	1965	1617	1275	1117
45°	2723	2758	2891	1769	1090	2093
55°	3247	4300	4609	1457	618	2864
65°	2631	5315	8742	512	261	2555
75°	933	1453	3069	138	137	997
85°	19	323	70	96	60	50
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°	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0
2.5°	1369.5	1375.0	1369.5	1370.9	1372.2	1370.9	1369.5	1369.5	1365.4	1368.1	1370.9
5°	1364.0	1368.1	1366.8	1368.1	1369.5	1368.1	1366.8	1368.1	1365.4	1366.8	1370.9
7.5°	1357.2	1355.8	1357.2	1359.9	1362.7	1362.7	1362.7	1364.0	1362.7	1362.7	1366.8
10°	1336.7	1338.0	1340.8	1344.9	1346.3	1350.4	1350.4	1354.5	1355.8	1358.6	1364.0
12.5°	1310.7	1312.0	1314.8	1317.5	1324.4	1331.2	1331.2	1340.8	1344.9	1351.7	1361.3
15°	1291.5	1292.9	1295.6	1298.4	1303.8	1310.7	1314.8	1325.7	1332.6	1344.9	1358.6
17.5°	1302.5	1301.1	1303.8	1305.2	1305.2	1310.7	1310.7	1318.9	1327.1	1338.0	1355.8
20°	1333.9	1333.9	1336.7	1336.7	1335.3	1338.0	1332.6	1332.6	1333.9	1339.4	1351.7
22.5°	1365.4	1364.0	1369.5	1372.2	1373.6	1377.7	1372.2	1370.9	1364.0	1359.9	1364.0
25°	1395.5	1394.1	1401.0	1405.1	1411.9	1416.0	1416.0	1416.0	1410.6	1403.7	1399.6
27.5°	1442.0	1442.0	1448.9	1453.0	1458.4	1466.6	1470.8	1470.8	1472.1	1462.5	1455.7
30°	1520.0	1521.4	1522.7	1528.2	1533.7	1536.4	1541.9	1546.0	1550.1	1544.6	1533.7
32.5°	1613.0	1604.8	1604.8	1613.0	1619.9	1628.1	1630.8	1636.3	1644.5	1640.4	1639.0
35°	1723.9	1721.1	1718.4	1721.1	1729.3	1738.9	1749.9	1759.4	1754.0	1762.2	1758.1
37.5°	1888.0	1890.8	1892.1	1892.1	1890.8	1893.5	1899.0	1908.6	1905.8	1908.6	1914.0
40°	2158.9	2149.3	2139.8	2141.1	2127.5	2130.2	2108.3	2117.9	2119.2	2109.7	2113.8
42.5°	2429.8	2435.3	2439.4	2450.3	2440.8	2435.3	2414.8	2414.8	2403.8	2394.2	2391.5
45°	2722.6	2733.5	2734.9	2756.8	2748.6	2766.4	2781.4	2777.3	2759.5	2758.2	2739.0
47.5°	2956.6	2974.3	2993.5	3019.5	3040.0	3079.7	3126.2	3149.5	3163.1	3174.1	3152.2
50°	3131.7	3139.9	3189.1	3230.2	3275.3	3341.0	3405.3	3488.8	3555.8	3587.3	3617.4
52.5°	3226.1	3246.6	3300.0	3364.3	3443.6	3542.1	3646.1	3778.8	3893.7	3970.3	4038.8
55°	3246.6	3267.1	3327.3	3409.4	3517.5	3650.2	3799.3	3979.9	4152.3	4300.1	4443.7
57.5°	3189.1	3212.4	3276.7	3371.1	3498.3	3659.8	3847.2	4083.9	4322.0	4561.4	4773.4
60°	3083.8	3112.5	3171.3	3264.4	3405.3	3587.3	3811.6	4108.5	4442.4	4809.0	5215.4
62.5°	2910.0	2940.1	2994.9	3097.5	3242.5	3443.6	3703.6	4073.0	4545.0	5122.3	5843.3
65°	2630.9	2644.6	2711.7	2815.6	2944.2	3165.9	3451.8	3897.8	4512.1	5315.2	6308.5
66°	2505.1	2528.3	2569.4	2652.8	2776.0	2983.9	3271.2	3724.1	4387.6	5248.2	6296.2
67.5°	2308.1	2325.8	2353.2	2409.3	2484.5	2637.8	2910.0	3338.3	4007.3	4908.9	6034.9
70°	1866.1	1874.4	1911.3	1930.4	1956.4	2007.1	2105.6	2351.8	2873.1	3720.0	4870.6
72.5°	1272.4	1295.6	1335.3	1390.0	1461.2	1529.6	1576.1	1607.6	1719.8	2219.1	3245.2
75°	933.1	957.7	1008.3	1080.8	1205.3	1347.6	1495.4	1563.8	1517.3	1453.0	1807.3
77.5°	541.8	574.6	617.0	686.8	801.7	990.5	1243.6	1468.0	1619.9	1629.5	1547.4
80°	228.5	232.6	258.6	294.2	365.3	498.0	695.0	1017.9	1354.5	1581.6	1634.9
82.5°	52.0	64.3	82.1	97.1	119.0	164.2	243.5	405.0	732.0	1147.9	1496.7
85°	19.2	19.2	26.0	38.3	43.8	49.3	64.3	102.6	175.1	322.9	673.1
87.5°	0.0	1.4	2.7	2.7	5.5	6.8	10.9	15.0	13.7	12.3	41.0
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°	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0
2.5°	1368.1	1366.8	1364.0	1364.0	1364.0	1364.0	1361.3	1362.7	1359.9	1361.3	1361.3
5°	1366.8	1366.8	1365.4	1362.7	1364.0	1364.0	1365.4	1362.7	1362.7	1364.0	1362.7
7.5°	1366.8	1365.4	1365.4	1365.4	1366.8	1365.4	1366.8	1366.8	1366.8	1368.1	1368.1
10°	1366.8	1366.8	1369.5	1370.9	1370.9	1372.2	1376.3	1376.3	1377.7	1379.1	1381.8
12.5°	1368.1	1373.6	1377.7	1381.8	1383.2	1385.9	1392.8	1392.8	1395.5	1399.6	1401.0
15°	1369.5	1377.7	1385.9	1388.7	1391.4	1396.9	1403.7	1406.4	1410.6	1414.7	1417.4
17.5°	1368.1	1379.1	1388.7	1392.8	1396.9	1403.7	1411.9	1414.7	1420.1	1425.6	1431.1
20°	1366.8	1381.8	1396.9	1402.3	1407.8	1417.4	1428.3	1435.2	1440.7	1448.9	1454.3
22.5°	1375.0	1392.8	1413.3	1421.5	1431.1	1443.4	1458.4	1466.6	1473.5	1481.7	1485.8
25°	1401.0	1414.7	1439.3	1453.0	1465.3	1485.8	1506.3	1515.9	1524.1	1530.9	1532.3
27.5°	1444.8	1448.9	1479.0	1496.7	1514.5	1547.4	1572.0	1578.8	1593.9	1599.4	1598.0
30°	1515.9	1509.1	1533.7	1561.0	1587.0	1632.2	1662.3	1680.1	1693.8	1693.8	1682.8
32.5°	1618.5	1607.6	1614.4	1645.9	1676.0	1741.6	1777.2	1800.5	1810.0	1807.3	1784.1
35°	1752.6	1745.7	1741.6	1766.3	1814.2	1890.8	1937.3	1949.6	1964.6	1961.9	1931.8
37.5°	1911.3	1905.8	1905.8	1934.6	1981.1	2094.6	2145.2	2153.5	2152.1	2130.2	2074.1
40°	2098.7	2096.0	2083.7	2100.1	2139.8	2287.5	2355.9	2366.9	2351.8	2316.3	2250.6
42.5°	2368.3	2351.8	2313.5	2323.1	2353.2	2496.9	2585.8	2615.9	2600.8	2565.3	2458.5
45°	2719.9	2702.1	2637.8	2629.6	2646.0	2771.9	2886.8	2893.6	2890.9	2845.7	2719.9
47.5°	3133.0	3105.7	3037.3	3015.4	3009.9	3126.2	3237.0	3248.0	3241.1	3174.1	3005.8
50°	3580.4	3540.7	3495.6	3480.5	3458.7	3542.1	3654.3	3655.7	3628.3	3535.3	3377.9
52.5°	4057.9	4044.2	4036.0	4021.0	4011.4	4083.9	4152.3	4111.3	4070.2	3973.1	3836.3
55°	4539.5	4595.6	4653.0	4658.5	4674.9	4752.9	4751.6	4639.4	4609.3	4555.9	4420.5
57.5°	5051.2	5259.1	5439.7	5495.8	5550.5	5695.6	5681.9	5571.1	5532.8	5467.1	5354.9
60°	5747.6	6308.5	6829.8	6954.3	7040.5	7214.2	7197.8	7026.8	7106.1	7100.6	6955.6
62.5°	6723.0	7656.1	8437.3	8628.9	8689.1	8708.2	8604.2	8419.5	8497.5	8585.1	8139.1
65°	7383.9	8481.1	9282.8	9430.6	9438.8	9210.3	8979.1	8761.6	8742.4	8667.2	8029.6
66°	7398.9	8522.1	9326.6	9470.3	9419.6	9107.7	8814.9	8596.0	8501.6	8336.1	7675.3
67.5°	7133.5	8266.3	9132.3	9284.2	9173.4	8731.5	8327.9	8046.0	7861.3	7593.2	7010.4
70°	5991.1	7114.3	8181.5	8464.7	8500.3	7840.8	7281.2	6950.2	6701.2	6333.1	5831.0
72.5°	4454.7	5469.8	6411.1	6682.0	6820.2	6293.4	5821.4	5569.7	5229.0	4841.8	4484.8
75°	2792.4	3509.3	4140.0	4330.2	4200.2	3792.5	3509.3	3403.9	3068.7	2837.5	2674.7
77.5°	1596.6	1821.0	1871.6	1799.1	1645.9	1260.1	896.1	663.5	576.0	637.6	703.2
80°	1558.3	1428.3	1138.3	1001.5	907.1	623.9	366.7	251.7	209.3	214.8	232.6
82.5°	1688.3	1811.4	1491.3	1216.3	1020.6	689.5	380.3	202.5	136.8	161.4	182.0
85°	1097.2	1526.8	1375.0	1158.8	938.5	589.7	313.3	105.3	69.8	91.7	125.9
87.5°	110.8	121.8	104.0	140.9	105.3	49.3	24.6	15.0	13.7	16.4	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°	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0	1364.0
2.5°	1362.7	1362.7	1364.0	1365.4	1366.8	1368.1	1368.1	1368.1	1368.1	1370.9	1369.5
5°	1365.4	1368.1	1370.9	1372.2	1375.0	1375.0	1379.1	1377.7	1377.7	1381.8	1383.2
7.5°	1370.9	1375.0	1380.5	1379.1	1384.6	1383.2	1385.9	1385.9	1381.8	1383.2	1380.5
10°	1383.2	1388.7	1391.4	1387.3	1388.7	1383.2	1381.8	1375.0	1366.8	1362.7	1357.2
12.5°	1403.7	1409.2	1409.2	1402.3	1394.1	1381.8	1372.2	1357.2	1344.9	1338.0	1331.2
15°	1421.5	1427.0	1425.6	1414.7	1402.3	1383.2	1369.5	1351.7	1333.9	1323.0	1316.2
17.5°	1435.2	1437.9	1433.8	1418.8	1405.1	1387.3	1373.6	1354.5	1333.9	1320.3	1307.9
20°	1455.7	1453.0	1443.4	1424.2	1409.2	1392.8	1381.8	1365.4	1342.1	1324.4	1306.6
22.5°	1485.8	1474.9	1457.1	1436.5	1421.5	1406.4	1395.5	1377.7	1354.5	1332.6	1312.0
25°	1525.5	1503.6	1479.0	1457.1	1443.4	1427.0	1414.7	1395.5	1370.9	1346.3	1321.6
27.5°	1582.9	1544.6	1513.2	1494.0	1479.0	1458.4	1443.4	1418.8	1392.8	1364.0	1336.7
30°	1647.2	1595.3	1565.2	1550.1	1533.7	1511.8	1488.5	1457.1	1427.0	1395.5	1362.7
32.5°	1730.7	1667.8	1639.0	1624.0	1602.1	1574.7	1547.4	1511.8	1469.4	1428.3	1388.7
35°	1840.1	1775.8	1745.7	1722.5	1692.4	1656.8	1617.1	1569.3	1511.8	1457.1	1406.4
37.5°	1957.8	1888.0	1859.3	1834.7	1789.5	1743.0	1686.9	1617.1	1539.2	1466.6	1403.7
40°	2106.9	2042.6	2005.7	1963.3	1909.9	1829.2	1741.6	1640.4	1540.5	1451.6	1377.7
42.5°	2295.7	2231.4	2176.7	2109.7	2016.6	1892.1	1767.6	1636.3	1515.9	1414.7	1335.3
45°	2546.1	2468.1	2373.7	2256.1	2105.6	1931.8	1769.0	1610.3	1469.4	1357.2	1272.4
47.5°	2852.6	2733.5	2578.9	2380.6	2164.4	1942.8	1747.1	1558.3	1396.9	1275.1	1180.7
50°	3216.5	3029.1	2774.6	2483.2	2194.5	1926.3	1692.4	1480.3	1294.3	1164.3	1052.1
52.5°	3632.4	3325.9	2951.1	2557.1	2193.1	1871.6	1599.4	1362.7	1160.2	1015.2	908.4
55°	4120.8	3665.2	3133.0	2611.8	2154.8	1770.4	1457.1	1197.1	994.6	860.6	762.1
57.5°	4836.4	4215.2	3450.5	2696.6	2078.2	1614.4	1264.2	998.7	820.9	693.6	610.2
60°	6144.3	5133.3	4022.3	2867.6	1960.5	1385.9	1038.4	786.7	637.6	534.9	478.8
62.5°	7129.4	5843.3	4331.5	2829.3	1723.9	1104.1	770.3	573.3	469.3	399.5	363.9
65°	6988.5	5623.1	4001.8	2436.7	1351.7	778.5	511.7	389.9	322.9	290.0	269.5
66°	6669.7	5335.7	3715.9	2193.1	1168.4	647.1	421.4	327.0	277.7	254.5	240.8
67.5°	6065.0	4802.2	3204.2	1797.7	897.5	469.3	317.4	258.6	225.7	216.2	206.6
70°	5041.6	3829.4	2249.2	1046.6	458.3	261.3	201.1	180.6	172.4	171.0	168.3
72.5°	3863.6	2710.3	1324.4	495.3	238.1	173.8	156.0	149.1	146.4	146.4	147.8
75°	2368.3	1522.7	585.6	242.2	166.9	146.4	138.2	135.4	134.1	135.4	134.1
77.5°	790.8	484.3	250.4	183.3	151.9	135.4	130.0	127.2	127.2	127.2	127.2
80°	242.2	210.7	191.5	169.6	143.7	128.6	120.4	119.0	120.4	121.8	117.7
82.5°	182.0	172.4	161.4	150.5	130.0	114.9	112.2	112.2	112.2	108.1	102.6
85°	134.1	132.7	109.5	102.6	95.8	95.8	95.8	95.8	91.7	84.8	79.4
87.5°	24.6	23.3	24.6	26.0	38.3	41.0	41.0	43.8	47.9	45.1	45.1
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: P155602

CATALOG NUMBER: TLM-E04-LED-E1-T3-7060

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	1364.0	1364.0	1364.0	1364.0	1364.0
2.5°	1369.5	1368.1	1372.2	1369.5	1370.9
5°	1381.8	1380.5	1383.2	1380.5	1384.6
7.5°	1377.7	1375.0	1373.6	1375.0	1376.3
10°	1349.0	1346.3	1344.9	1343.5	1344.9
12.5°	1324.4	1318.9	1318.9	1316.2	1317.5
15°	1306.6	1302.5	1301.1	1298.4	1299.7
17.5°	1298.4	1291.5	1288.8	1286.1	1286.1
20°	1292.9	1284.7	1280.6	1277.8	1276.5
22.5°	1292.9	1280.6	1275.1	1272.4	1271.0
25°	1298.4	1283.3	1275.1	1271.0	1269.6
27.5°	1309.3	1290.2	1280.6	1275.1	1275.1
30°	1328.5	1303.8	1290.2	1283.3	1281.9
32.5°	1347.6	1314.8	1295.6	1287.4	1284.7
35°	1357.2	1314.8	1291.5	1277.8	1275.1
37.5°	1346.3	1297.0	1268.3	1247.7	1243.6
40°	1312.0	1260.1	1228.6	1209.4	1206.7
42.5°	1266.9	1216.3	1179.3	1165.7	1161.6
45°	1205.3	1145.1	1108.2	1089.0	1090.4
47.5°	1100.0	1038.4	1005.6	987.8	990.5
50°	975.5	915.3	886.6	867.4	871.5
52.5°	838.7	783.9	756.6	747.0	744.3
55°	695.0	652.6	633.4	622.5	618.4
57.5°	563.7	533.6	519.9	506.2	507.6
60°	444.6	429.6	425.5	410.4	409.1
62.5°	350.2	340.7	336.6	325.6	327.0
65°	265.4	262.7	265.4	258.6	261.3
66°	239.4	240.8	240.8	236.7	239.4
67.5°	206.6	209.3	213.4	209.3	212.1
70°	171.0	173.8	176.5	176.5	176.5
72.5°	149.1	151.9	153.2	153.2	153.2
75°	136.8	138.2	139.6	136.8	136.8
77.5°	128.6	128.6	125.9	124.5	123.1
80°	116.3	114.9	110.8	108.1	108.1
82.5°	97.1	94.4	91.7	87.6	87.6
85°	73.9	71.1	68.4	62.9	60.2
87.5°	38.3	39.7	38.3	31.5	27.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)