

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: P156639

Luminaire Tested: **TLM-E04-LED-E1-T4-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P156639
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-T4-7030
Description: TALON MEDIUM LED SITE LUMINAIRE
(4) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (84) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11040.7 lumens
Efficiency: N/A
Efficacy: 113.6 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

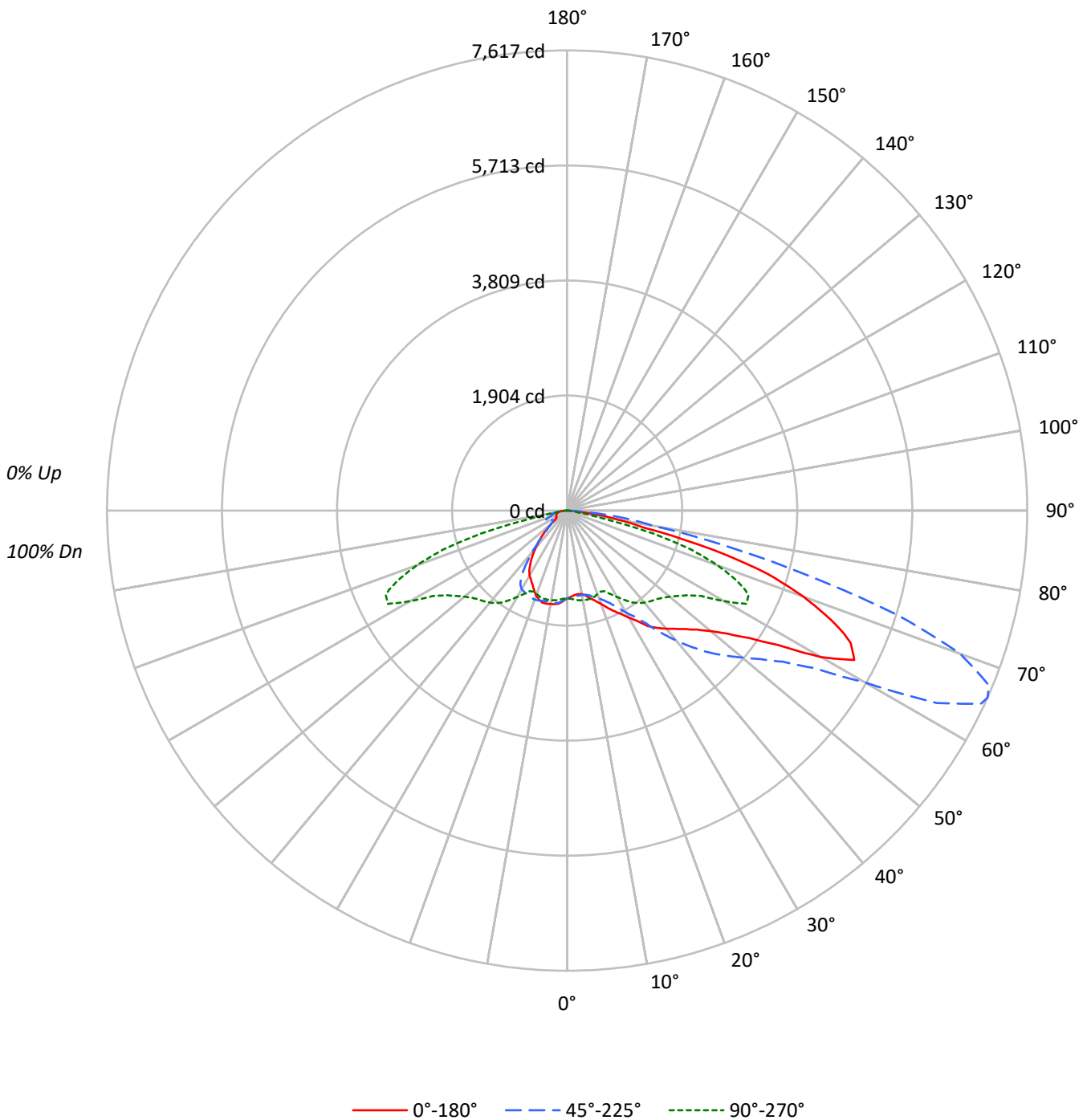
Input Watts (W): 97.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	23380	23380	23380
5°	22624	23881	24903
10°	22886	24594	25607
15°	25075	25096	26271
20°	28107	25151	25609
25°	32531	26143	23984
30°	37953	30611	23066
35°	45785	36352	20756
40°	53506	41732	17136
45°	63057	47231	13032
50°	77522	55396	8340
55°	103114	68357	6243
60°	155694	96335	6574
65°	196888	125919	7591
70°	195293	124416	9038
75°	154890	92147	11111
80°	78529	19382	13859
85°	11447	15945	17733



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.3	1.3
10°-20°	429.1	3.9
20°-30°	739.0	6.7
30°-40°	1118.1	10.1
40°-50°	1449.2	13.1
50°-60°	1998.0	18.1
60°-70°	3104.2	28.1
70°-80°	1805.1	16.3
80°-90°	256.7	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°	1309.4	11.9
0°-40°	2427.5	22.0
0°-60°	5874.7	53.2
0°-90°	11040.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11040.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1455	1455	1455	1455	1455	
5°	1403	1424	1481	1530	1544	134
15°	1508	1455	1509	1548	1580	432
25°	1835	1696	1475	1542	1353	856
35°	2334	2281	1854	1308	1058	1459
45°	2775	3322	2079	548	574	2169
55°	3681	4361	2440	282	223	3410
65°	5179	7561	3312	399	200	4902
75°	2495	4065	1484	251	179	2570
85°	62	424	86	102	96	269
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°	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3
2.5°	1428.5	1433.4	1429.7	1430.9	1430.9	1432.1	1432.1	1433.4	1432.1	1435.8	1438.2
5°	1402.9	1405.3	1404.1	1406.6	1409.0	1413.9	1412.6	1418.7	1420.0	1423.6	1429.7
7.5°	1393.2	1390.7	1391.9	1395.6	1398.0	1400.5	1402.9	1407.8	1411.4	1420.0	1424.8
10°	1402.9	1401.7	1402.9	1405.3	1405.3	1406.6	1404.1	1409.0	1411.4	1418.7	1423.6
12.5°	1443.1	1443.1	1440.7	1440.7	1438.2	1435.8	1429.7	1426.0	1424.8	1426.0	1428.5
15°	1507.6	1505.2	1500.3	1496.7	1491.8	1483.3	1474.8	1467.4	1462.6	1455.3	1452.8
17.5°	1571.0	1567.3	1562.4	1557.6	1551.5	1543.0	1529.6	1521.0	1507.6	1499.1	1494.2
20°	1644.0	1636.7	1630.6	1624.5	1612.4	1609.9	1596.5	1581.9	1566.1	1546.6	1544.2
22.5°	1739.0	1726.8	1719.5	1715.9	1703.7	1700.0	1678.1	1657.4	1637.9	1612.4	1606.3
25°	1835.2	1823.0	1819.4	1814.5	1806.0	1801.1	1780.4	1757.3	1731.7	1696.4	1689.1
27.5°	1929.0	1930.2	1920.5	1924.1	1921.7	1913.2	1892.5	1869.3	1849.8	1808.4	1799.9
30°	2045.9	2038.6	2033.7	2041.0	2032.5	2033.7	2015.5	2003.3	1971.6	1947.3	1930.2
32.5°	2167.7	2166.5	2173.8	2178.6	2177.4	2175.0	2160.4	2148.2	2120.2	2084.9	2077.6
35°	2334.5	2341.8	2347.9	2369.8	2369.8	2385.7	2371.1	2356.4	2323.6	2280.9	2266.3
37.5°	2447.8	2450.2	2474.6	2503.8	2540.3	2574.4	2584.2	2587.8	2574.4	2542.8	2520.8
40°	2551.3	2556.2	2595.1	2640.2	2693.8	2760.8	2800.9	2819.2	2822.9	2808.2	2760.8
42.5°	2654.8	2662.1	2702.3	2768.1	2842.3	2927.6	2998.2	3043.3	3068.9	3068.9	3040.8
45°	2775.4	2785.1	2829.0	2900.8	2987.3	3094.4	3191.9	3278.3	3319.7	3322.2	3295.4
47.5°	2917.8	2926.4	2977.5	3050.6	3139.5	3247.9	3370.9	3469.5	3546.2	3551.1	3529.2
50°	3101.7	3113.9	3156.5	3222.3	3313.6	3423.2	3546.2	3683.8	3764.2	3783.7	3760.6
52.5°	3345.3	3347.7	3383.0	3443.9	3532.8	3637.6	3767.9	3917.7	4023.6	4039.4	4001.7
55°	3681.4	3677.8	3700.9	3766.7	3833.6	3915.2	4050.4	4218.5	4336.6	4360.9	4322.0
57.5°	4138.1	4134.4	4153.9	4169.7	4295.2	4374.3	4507.1	4667.8	4782.3	4852.9	4786.0
60°	4845.6	4842.0	4873.6	4966.2	5060.0	5175.7	5304.7	5497.2	5657.9	5678.6	5612.8
62.5°	5358.3	5376.6	5446.0	5554.4	5744.4	5970.9	6207.1	6460.4	6790.5	6895.2	6863.5
65°	5179.3	5215.8	5312.0	5476.4	5729.8	6042.7	6412.9	6872.0	7314.1	7561.3	7554.0
66°	5018.6	5058.7	5176.9	5335.2	5603.1	5945.3	6349.6	6850.1	7344.6	7617.3	7634.4
67.5°	4726.3	4771.3	4887.0	5074.6	5335.2	5699.3	6134.1	6678.4	7237.4	7555.2	7600.3
70°	4157.6	4208.7	4292.7	4447.4	4704.4	5029.5	5487.4	5974.5	6560.3	6924.4	6979.2
72.5°	3475.6	3520.7	3614.4	3741.1	3951.8	4156.4	4515.6	4874.9	5293.8	5709.0	5668.9
75°	2495.3	2514.8	2570.8	2708.4	2821.6	3005.5	3294.2	3588.9	3875.0	4065.0	4091.8
77.5°	1297.0	1348.1	1427.3	1579.5	1702.5	1868.1	2055.6	2277.3	2486.7	2660.9	2613.4
80°	848.8	870.7	941.4	1019.3	1109.4	1215.4	1340.8	1423.6	1450.4	1439.4	1450.4
82.5°	489.6	529.7	623.5	683.2	750.2	786.7	886.6	981.5	1035.1	968.2	943.8
85°	62.1	80.4	253.3	319.1	365.3	420.1	450.6	507.8	473.7	423.8	516.3
87.5°	13.4	12.2	17.0	36.5	37.8	31.7	59.7	63.3	39.0	19.5	24.4
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°	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3
2.5°	1440.7	1441.9	1444.3	1448.0	1450.4	1452.8	1455.3	1458.9	1461.4	1463.8	1468.7
5°	1434.6	1439.4	1444.3	1449.2	1455.3	1465.0	1471.1	1476.0	1480.8	1490.6	1494.2
7.5°	1430.9	1439.4	1446.7	1455.3	1465.0	1473.5	1484.5	1490.6	1497.9	1504.0	1511.3
10°	1428.5	1440.7	1448.0	1460.1	1471.1	1479.6	1491.8	1499.1	1507.6	1514.9	1518.6
12.5°	1433.4	1439.4	1446.7	1458.9	1472.3	1484.5	1497.9	1504.0	1511.3	1517.4	1518.6
15°	1454.1	1454.1	1455.3	1465.0	1478.4	1488.2	1499.1	1505.2	1508.9	1512.5	1512.5
17.5°	1491.8	1483.3	1477.2	1478.4	1486.9	1493.0	1499.1	1499.1	1496.7	1495.5	1493.0
20°	1535.6	1524.7	1512.5	1504.0	1501.5	1496.7	1493.0	1480.8	1471.1	1462.6	1456.5
22.5°	1599.0	1581.9	1564.9	1549.0	1534.4	1516.2	1495.5	1471.1	1448.0	1432.1	1422.4
25°	1676.9	1663.5	1642.8	1618.5	1600.2	1566.1	1539.3	1504.0	1474.8	1454.1	1437.0
27.5°	1787.7	1771.9	1752.4	1730.5	1703.7	1666.0	1633.1	1591.7	1556.3	1525.9	1504.0
30°	1925.3	1904.6	1890.0	1863.2	1845.0	1802.3	1769.5	1718.3	1650.1	1601.4	1571.0
32.5°	2066.6	2043.5	2031.3	2010.6	1989.9	1964.3	1914.4	1835.2	1747.5	1668.4	1616.0
35°	2255.4	2231.0	2209.1	2190.8	2160.4	2112.9	2069.0	1974.1	1853.5	1742.7	1655.0
37.5°	2492.8	2452.7	2397.8	2351.6	2298.0	2229.8	2162.8	2065.4	1927.8	1784.1	1667.2
40°	2746.1	2675.5	2597.6	2511.1	2418.6	2319.9	2243.2	2144.5	1989.9	1819.4	1658.6
42.5°	3010.4	2898.4	2790.0	2668.2	2539.1	2422.2	2322.3	2214.0	2036.2	1829.1	1624.5
45°	3272.2	3146.8	2982.4	2822.9	2659.7	2514.8	2402.7	2280.9	2078.8	1832.8	1579.5
47.5°	3489.0	3359.9	3172.4	2972.7	2779.0	2614.6	2483.1	2351.6	2136.0	1858.4	1568.5
50°	3717.9	3560.8	3352.6	3116.4	2897.1	2713.3	2573.2	2436.8	2216.4	1924.1	1603.8
52.5°	3967.6	3787.4	3543.8	3279.5	3039.6	2833.8	2681.6	2541.5	2318.7	2016.7	1670.8
55°	4272.0	4051.6	3787.4	3489.0	3232.0	3004.3	2836.3	2670.6	2440.5	2126.3	1754.9
57.5°	4737.2	4466.9	4169.7	3830.0	3545.0	3275.9	3074.9	2883.8	2629.2	2289.5	1869.3
60°	5578.7	5290.1	4904.1	4492.5	4157.6	3843.4	3548.7	3311.2	2998.2	2611.0	2122.6
62.5°	6784.4	6400.8	5885.6	5309.6	4871.2	4418.2	4085.7	3732.6	3344.1	2926.4	2421.0
65°	7454.2	6989.0	6299.7	5631.1	5067.3	4575.3	4152.7	3743.5	3312.4	2913.0	2490.4
66°	7537.0	7052.3	6336.2	5632.3	5040.5	4535.1	4090.6	3666.8	3226.0	2844.8	2461.2
67.5°	7502.9	7007.2	6269.2	5526.4	4924.8	4381.6	3922.5	3482.9	3043.3	2687.7	2363.8
70°	6943.9	6473.8	5749.2	5029.5	4458.4	3922.5	3484.1	3051.8	2648.7	2344.3	2105.6
72.5°	5766.3	5364.4	4734.8	4169.7	3721.6	3279.5	2908.1	2495.3	2154.3	1929.0	1787.7
75°	4162.4	3918.9	3345.3	3021.4	2628.0	2334.5	1974.1	1729.3	1484.5	1374.9	1350.5
77.5°	2629.2	2301.6	1937.5	1595.3	1311.6	1087.5	846.4	718.5	599.2	587.0	708.8
80°	1331.1	1198.3	923.1	735.6	618.6	500.5	395.8	299.6	209.5	252.1	302.0
82.5°	871.9	727.0	569.9	468.9	408.0	338.5	263.0	182.7	134.0	151.0	207.0
85°	471.3	401.9	323.9	255.7	207.0	185.1	124.2	87.7	86.5	92.6	118.1
87.5°	34.1	34.1	26.8	24.4	29.2	24.4	21.9	21.9	20.7	21.9	29.2
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°	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3	1455.3
2.5°	1471.1	1474.8	1476.0	1482.1	1485.7	1488.2	1490.6	1490.6	1491.8	1495.5	1496.7
5°	1499.1	1505.2	1512.5	1517.4	1519.8	1527.1	1529.6	1529.6	1532.0	1536.9	1540.5
7.5°	1516.2	1524.7	1532.0	1534.4	1539.3	1541.7	1545.4	1547.8	1547.8	1552.7	1555.1
10°	1522.3	1527.1	1534.4	1534.4	1539.3	1539.3	1543.0	1544.2	1544.2	1549.0	1552.7
12.5°	1522.3	1524.7	1530.8	1530.8	1534.4	1535.6	1540.5	1544.2	1545.4	1551.5	1556.3
15°	1514.9	1517.4	1522.3	1523.5	1532.0	1536.9	1547.8	1555.1	1555.1	1561.2	1563.7
17.5°	1494.2	1500.3	1510.1	1519.8	1535.6	1546.6	1560.0	1566.1	1561.2	1557.6	1553.9
20°	1460.1	1471.1	1494.2	1518.6	1546.6	1561.2	1568.5	1562.4	1545.4	1528.3	1517.4
22.5°	1426.0	1448.0	1486.9	1523.5	1555.1	1564.9	1561.2	1539.3	1511.3	1490.6	1476.0
25°	1441.9	1467.4	1505.2	1538.1	1558.8	1556.3	1541.7	1511.3	1480.8	1454.1	1429.7
27.5°	1507.6	1535.6	1556.3	1567.3	1564.9	1547.8	1524.7	1490.6	1454.1	1418.7	1384.6
30°	1569.7	1584.4	1589.2	1580.7	1561.2	1533.2	1504.0	1465.0	1416.3	1372.5	1333.5
32.5°	1597.8	1583.1	1560.0	1536.9	1505.2	1480.8	1440.7	1398.0	1337.1	1284.8	1245.8
35°	1597.8	1539.3	1480.8	1432.1	1384.6	1354.2	1307.9	1250.7	1194.7	1150.8	1120.4
37.5°	1562.4	1450.4	1354.2	1275.0	1215.4	1182.5	1113.1	1061.9	1014.4	999.8	980.3
40°	1497.9	1332.3	1193.4	1089.9	1014.4	965.7	896.3	861.0	842.7	835.4	831.8
42.5°	1411.4	1200.8	1015.6	887.8	806.2	751.4	705.1	683.2	682.0	680.8	680.8
45°	1318.9	1059.5	842.7	690.5	618.6	569.9	548.0	539.5	546.8	545.6	546.8
47.5°	1261.6	952.3	684.4	522.4	467.6	436.0	425.0	428.7	434.8	432.3	432.3
50°	1254.3	897.5	578.5	406.7	365.3	349.5	347.1	347.1	350.7	348.3	347.1
52.5°	1281.1	889.0	523.7	349.5	316.6	303.2	300.8	299.6	298.4	291.1	285.0
55°	1327.4	908.5	507.8	334.9	300.8	286.2	282.5	280.1	275.2	265.5	254.5
57.5°	1420.0	969.4	522.4	342.2	305.7	293.5	289.8	289.8	280.1	264.3	248.4
60°	1642.8	1124.0	582.1	370.2	328.8	316.6	319.1	317.8	303.2	280.1	255.7
62.5°	1930.2	1326.2	660.0	409.2	358.0	355.6	367.8	365.3	341.0	305.7	270.4
65°	2063.0	1421.2	682.0	417.7	364.1	375.1	399.4	397.0	366.6	317.8	272.8
66°	2065.4	1421.2	672.2	410.4	355.6	369.0	393.3	392.1	361.7	313.0	267.9
67.5°	2015.5	1382.2	644.2	395.8	338.5	348.3	370.2	369.0	341.0	300.8	258.2
70°	1827.9	1237.3	572.4	370.2	315.4	310.5	317.8	313.0	294.7	266.7	237.5
72.5°	1566.1	1038.8	499.3	350.7	299.6	280.1	275.2	271.6	257.0	241.1	222.9
75°	1233.6	822.0	438.4	336.1	285.0	259.4	250.9	246.0	236.3	225.3	210.7
77.5°	761.1	588.2	382.4	316.6	274.0	248.4	242.3	235.0	220.4	207.0	196.1
80°	339.8	364.1	314.2	276.4	244.8	221.6	211.9	200.9	186.3	177.8	171.7
82.5°	226.5	235.0	227.7	207.0	185.1	166.8	152.2	152.2	149.8	142.5	140.0
85°	144.9	146.1	141.3	127.9	119.3	108.4	102.3	103.5	108.4	107.2	105.9
87.5°	32.9	32.9	39.0	36.5	42.6	45.1	48.7	52.4	59.7	59.7	63.3
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: P156639

CATALOG NUMBER: TLM-E04-LED-E1-T4-7030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	1455.3	1455.3	1455.3	1455.3	1455.3
2.5°	1497.9	1500.3	1502.8	1499.1	1500.3
5°	1540.5	1539.3	1545.4	1541.7	1544.2
7.5°	1553.9	1555.1	1560.0	1560.0	1561.2
10°	1555.1	1557.6	1563.7	1567.3	1569.7
12.5°	1561.2	1566.1	1575.8	1578.3	1578.3
15°	1566.1	1568.5	1574.6	1577.1	1579.5
17.5°	1549.0	1544.2	1546.6	1547.8	1546.6
20°	1506.4	1501.5	1500.3	1495.5	1497.9
22.5°	1460.1	1446.7	1438.2	1428.5	1428.5
25°	1404.1	1383.4	1366.4	1349.3	1353.0
27.5°	1351.8	1325.0	1307.9	1297.0	1294.5
30°	1300.6	1272.6	1256.8	1243.4	1243.4
32.5°	1215.4	1195.9	1175.2	1166.7	1165.4
35°	1097.2	1085.1	1068.0	1064.4	1058.3
37.5°	964.5	960.8	946.2	945.0	938.9
40°	825.7	828.1	823.2	820.8	817.1
42.5°	686.8	699.0	696.6	695.4	692.9
45°	554.1	562.6	563.8	567.5	573.6
47.5°	436.0	438.4	440.8	439.6	440.8
50°	341.0	334.9	333.7	330.0	333.7
52.5°	275.2	265.5	260.6	255.7	253.3
55°	242.3	232.6	227.7	225.3	222.9
57.5°	233.8	224.1	216.8	211.9	210.7
60°	236.3	221.6	211.9	205.8	204.6
62.5°	242.3	222.9	209.5	203.4	202.2
65°	241.1	220.4	208.2	200.9	199.7
66°	237.5	218.0	205.8	199.7	198.5
67.5°	231.4	214.3	203.4	198.5	196.1
70°	220.4	209.5	200.9	194.8	192.4
72.5°	210.7	202.2	194.8	188.8	187.5
75°	199.7	192.4	185.1	180.2	179.0
77.5°	186.3	179.0	174.1	170.5	169.3
80°	164.4	159.5	154.7	149.8	149.8
82.5°	136.4	132.7	127.9	124.2	123.0
85°	104.7	104.7	101.1	97.4	96.2
87.5°	62.1	60.9	60.9	57.2	57.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)