

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: P156654

Luminaire Tested: **TLM-F05-LED-E1-T4-7030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P156654
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-F05-LED-E1-T4-7030
Description: TALON MEDIUM LED SITE LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (35) 3000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11393.0 lumens
Efficiency: N/A
Efficacy: 85.5 lumens/watt
Spacing Criteria (0/90/45): 1.73 / 2.02 / 2.64
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')
CIE Type: Direct

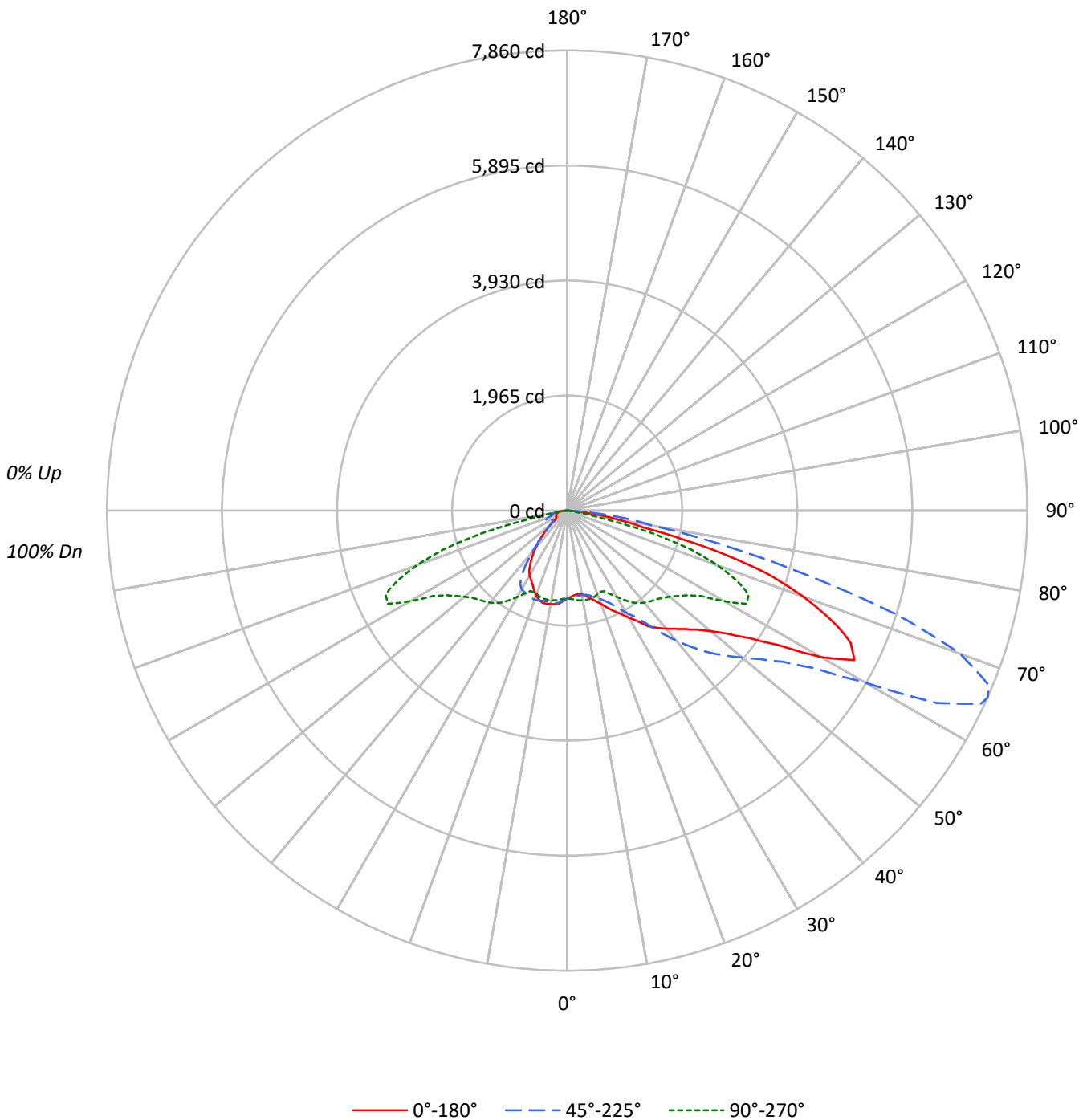
Input Watts (W): 133.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	19475	19475	19475
5°	18846	19893	20743
10°	19064	20486	21331
15°	20887	20904	21883
20°	23413	20950	21332
25°	27099	21776	19977
30°	31615	25499	19213
35°	38139	30280	17288
40°	44570	34763	14275
45°	52525	39342	10856
50°	64576	46143	6946
55°	85893	56939	5200
60°	129691	80247	5475
65°	164006	104889	6324
70°	162674	103636	7530
75°	129020	76758	9255
80°	65415	16139	11546
85°	9538	13273	14776



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.8	1.3
10°-20°	442.7	3.9
20°-30°	762.6	6.7
30°-40°	1153.8	10.1
40°-50°	1495.4	13.1
50°-60°	2061.8	18.1
60°-70°	3203.3	28.1
70°-80°	1862.7	16.3
80°-90°	264.9	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°	1351.2	11.9
0°-40°	2504.9	22.0
0°-60°	6062.1	53.2
0°-90°	11393.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11393.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1502	1502	1502	1502	1502	
5°	1448	1469	1528	1578	1593	138
15°	1556	1502	1557	1597	1630	446
25°	1894	1750	1522	1591	1396	883
35°	2409	2354	1913	1350	1092	1505
45°	2864	3428	2145	566	592	2238
55°	3799	4500	2518	292	230	3519
65°	5345	7803	3418	412	206	5058
75°	2575	4195	1532	259	185	2652
85°	64	437	89	106	99	277
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°	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7
2.5°	1474.1	1479.1	1475.3	1476.6	1476.6	1477.8	1477.8	1479.1	1477.8	1481.6	1484.1
5°	1447.7	1450.2	1448.9	1451.4	1454.0	1459.0	1457.7	1464.0	1465.3	1469.0	1475.3
7.5°	1437.6	1435.1	1436.4	1440.1	1442.6	1445.2	1447.7	1452.7	1456.5	1465.3	1470.3
10°	1447.7	1446.4	1447.7	1450.2	1450.2	1451.4	1448.9	1454.0	1456.5	1464.0	1469.0
12.5°	1489.1	1489.1	1486.6	1486.6	1484.1	1481.6	1475.3	1471.5	1470.3	1471.5	1474.1
15°	1555.7	1553.2	1548.2	1544.4	1539.4	1530.6	1521.8	1514.3	1509.2	1501.7	1499.2
17.5°	1621.1	1617.3	1612.3	1607.3	1601.0	1592.2	1578.4	1569.6	1555.7	1546.9	1541.9
20°	1696.5	1688.9	1682.7	1676.4	1663.8	1661.3	1647.5	1632.4	1616.1	1596.0	1593.4
22.5°	1794.5	1781.9	1774.4	1770.6	1758.1	1754.3	1731.7	1710.3	1690.2	1663.8	1657.5
25°	1893.8	1881.2	1877.4	1872.4	1863.6	1858.6	1837.2	1813.4	1787.0	1750.5	1743.0
27.5°	1990.5	1991.8	1981.7	1985.5	1983.0	1974.2	1952.8	1929.0	1908.9	1866.1	1857.3
30°	2111.2	2103.6	2098.6	2106.2	2097.4	2098.6	2079.8	2067.2	2034.5	2009.4	1991.8
32.5°	2236.8	2235.6	2243.1	2248.2	2246.9	2244.4	2229.3	2216.7	2187.8	2151.4	2143.9
35°	2409.0	2416.5	2422.8	2445.5	2445.5	2461.8	2446.7	2431.6	2397.7	2353.7	2338.6
37.5°	2525.9	2528.4	2553.5	2583.7	2621.4	2656.6	2666.6	2670.4	2656.6	2623.9	2601.3
40°	2632.7	2637.7	2677.9	2724.4	2779.7	2848.8	2890.3	2909.2	2912.9	2897.8	2848.8
42.5°	2739.5	2747.0	2788.5	2856.4	2933.0	3021.0	3093.9	3140.4	3166.8	3166.8	3137.9
45°	2863.9	2874.0	2919.2	2993.4	3082.6	3193.2	3293.7	3382.9	3425.6	3428.2	3400.5
47.5°	3010.9	3019.7	3072.5	3147.9	3239.7	3351.5	3478.4	3580.2	3659.4	3664.4	3641.8
50°	3200.7	3213.3	3257.3	3325.1	3419.4	3532.5	3659.4	3801.4	3884.3	3904.4	3880.6
52.5°	3452.0	3454.5	3491.0	3553.8	3645.6	3753.6	3888.1	4042.7	4152.0	4168.3	4129.4
55°	3798.9	3795.1	3819.0	3886.8	3956.0	4040.1	4179.6	4353.1	4475.0	4500.1	4459.9
57.5°	4270.1	4266.3	4286.5	4302.8	4432.2	4513.9	4650.9	4816.8	4934.9	5007.8	4938.7
60°	5000.2	4996.5	5029.1	5124.6	5221.4	5340.8	5474.0	5672.5	5838.4	5859.8	5791.9
62.5°	5529.3	5548.1	5619.8	5731.6	5927.6	6161.4	6405.2	6666.6	7007.1	7115.2	7082.5
65°	5344.6	5382.3	5481.5	5651.2	5912.6	6235.5	6617.5	7091.3	7547.5	7802.6	7795.0
66°	5178.7	5220.1	5342.0	5505.4	5781.9	6135.0	6552.2	7068.7	7578.9	7860.4	7878.0
67.5°	4877.1	4923.6	5043.0	5236.5	5505.4	5881.1	6329.8	6891.5	7468.3	7796.3	7842.8
70°	4290.2	4343.0	4429.7	4589.3	4854.5	5190.0	5662.5	6165.2	6769.6	7145.3	7201.9
72.5°	3586.5	3633.0	3729.8	3860.4	4077.8	4289.0	4659.7	5030.4	5462.7	5891.2	5849.7
75°	2574.9	2595.0	2652.8	2794.8	2911.7	3101.4	3399.3	3703.4	3998.7	4194.7	4222.4
77.5°	1338.3	1391.1	1472.8	1629.9	1756.8	1927.7	2121.2	2349.9	2566.1	2745.8	2696.8
80°	875.9	898.5	971.4	1051.8	1144.8	1254.1	1383.6	1469.0	1496.7	1485.4	1496.7
82.5°	505.2	546.6	643.4	705.0	774.1	811.8	914.8	1012.9	1068.2	999.0	973.9
85°	64.1	82.9	261.4	329.2	377.0	433.5	465.0	524.0	488.8	437.3	532.8
87.5°	13.8	12.6	17.6	37.7	39.0	32.7	61.6	65.3	40.2	20.1	25.1
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°	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7
2.5°	1486.6	1487.9	1490.4	1494.2	1496.7	1499.2	1501.7	1505.5	1508.0	1510.5	1515.5
5°	1480.3	1485.4	1490.4	1495.4	1501.7	1511.8	1518.0	1523.1	1528.1	1538.1	1541.9
7.5°	1476.6	1485.4	1492.9	1501.7	1511.8	1520.6	1531.9	1538.1	1545.7	1552.0	1559.5
10°	1474.1	1486.6	1494.2	1506.7	1518.0	1526.8	1539.4	1546.9	1555.7	1563.3	1567.0
12.5°	1479.1	1485.4	1492.9	1505.5	1519.3	1531.9	1545.7	1552.0	1559.5	1565.8	1567.0
15°	1500.4	1500.4	1501.7	1511.8	1525.6	1535.6	1546.9	1553.2	1557.0	1560.8	1560.8
17.5°	1539.4	1530.6	1524.3	1525.6	1534.4	1540.7	1546.9	1546.9	1544.4	1543.2	1540.7
20°	1584.6	1573.3	1560.8	1552.0	1549.5	1544.4	1540.7	1528.1	1518.0	1509.2	1503.0
22.5°	1650.0	1632.4	1614.8	1598.5	1583.4	1564.5	1543.2	1518.0	1494.2	1477.8	1467.8
25°	1730.4	1716.6	1695.2	1670.1	1651.2	1616.1	1588.4	1552.0	1521.8	1500.4	1482.9
27.5°	1844.8	1828.4	1808.3	1785.7	1758.1	1719.1	1685.2	1642.4	1606.0	1574.6	1552.0
30°	1986.8	1965.4	1950.3	1922.7	1903.8	1859.9	1825.9	1773.1	1702.8	1652.5	1621.1
32.5°	2132.5	2108.7	2096.1	2074.7	2053.4	2027.0	1975.5	1893.8	1803.3	1721.6	1667.6
35°	2327.3	2302.2	2279.6	2260.7	2229.3	2180.3	2135.1	2037.0	1912.6	1798.3	1707.8
37.5°	2572.4	2530.9	2474.4	2426.6	2371.3	2300.9	2231.8	2131.3	1989.3	1841.0	1720.4
40°	2833.8	2760.9	2680.4	2591.2	2495.7	2393.9	2314.8	2213.0	2053.4	1877.4	1711.6
42.5°	3106.5	2990.8	2879.0	2753.3	2620.1	2499.5	2396.4	2284.6	2101.1	1887.5	1676.4
45°	3376.6	3247.2	3077.6	2912.9	2744.5	2595.0	2479.4	2353.7	2145.1	1891.3	1629.9
47.5°	3600.3	3467.1	3273.6	3067.5	2867.7	2698.0	2562.3	2426.6	2204.2	1917.7	1618.6
50°	3836.6	3674.5	3459.6	3215.8	2989.6	2799.8	2655.3	2514.6	2287.1	1985.5	1655.0
52.5°	4094.2	3908.2	3656.9	3384.2	3136.6	2924.2	2767.2	2622.6	2392.7	2081.0	1724.1
55°	4408.3	4180.9	3908.2	3600.3	3335.2	3100.2	2926.8	2755.8	2518.3	2194.1	1810.8
57.5°	4888.4	4609.4	4302.8	3952.2	3658.1	3380.4	3173.1	2975.8	2713.1	2362.5	1929.0
60°	5756.7	5458.9	5060.6	4635.8	4290.2	3966.0	3661.9	3416.8	3093.9	2694.3	2190.4
62.5°	7000.8	6605.0	6073.4	5479.0	5026.6	4559.1	4216.1	3851.6	3450.8	3019.7	2498.2
65°	7692.0	7211.9	6500.7	5810.8	5228.9	4721.3	4285.2	3863.0	3418.1	3005.9	2569.9
66°	7777.4	7277.3	6538.4	5812.0	5201.3	4679.8	4221.1	3783.8	3328.9	2935.5	2539.7
67.5°	7742.3	7230.8	6469.3	5702.7	5081.9	4521.4	4047.7	3594.0	3140.4	2773.4	2439.2
70°	7165.5	6680.4	5932.7	5190.0	4600.6	4047.7	3595.3	3149.2	2733.2	2419.1	2172.8
72.5°	5950.3	5535.6	4885.9	4302.8	3840.3	3384.2	3000.9	2574.9	2223.0	1990.5	1844.8
75°	4295.2	4043.9	3452.0	3117.8	2711.9	2409.0	2037.0	1784.5	1531.9	1418.8	1393.6
77.5°	2713.1	2375.1	1999.3	1646.2	1353.4	1122.2	873.4	741.4	618.3	605.7	731.4
80°	1373.5	1236.5	952.5	759.0	638.4	516.5	408.4	309.1	216.1	260.1	311.7
82.5°	899.8	750.2	588.1	483.8	421.0	349.4	271.4	188.5	138.2	155.8	213.6
85°	486.3	414.7	334.3	263.9	213.6	191.0	128.2	90.5	89.2	95.5	121.9
87.5°	35.2	35.2	27.6	25.1	30.2	25.1	22.6	22.6	21.4	22.6	30.2
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°	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7	1501.7
2.5°	1518.0	1521.8	1523.1	1529.4	1533.1	1535.6	1538.1	1538.1	1539.4	1543.2	1544.4
5°	1546.9	1553.2	1560.8	1565.8	1568.3	1575.8	1578.4	1578.4	1580.9	1585.9	1589.7
7.5°	1564.5	1573.3	1580.9	1583.4	1588.4	1590.9	1594.7	1597.2	1597.2	1602.2	1604.7
10°	1570.8	1575.8	1583.4	1583.4	1588.4	1588.4	1592.2	1593.4	1593.4	1598.5	1602.2
12.5°	1570.8	1573.3	1579.6	1579.6	1583.4	1584.6	1589.7	1593.4	1594.7	1601.0	1606.0
15°	1563.3	1565.8	1570.8	1572.1	1580.9	1585.9	1597.2	1604.7	1604.7	1611.0	1613.5
17.5°	1541.9	1548.2	1558.3	1568.3	1584.6	1596.0	1609.8	1616.1	1611.0	1607.3	1603.5
20°	1506.7	1518.0	1541.9	1567.0	1596.0	1611.0	1618.6	1612.3	1594.7	1577.1	1565.8
22.5°	1471.5	1494.2	1534.4	1572.1	1604.7	1614.8	1611.0	1588.4	1559.5	1538.1	1523.1
25°	1487.9	1514.3	1553.2	1587.2	1608.5	1606.0	1590.9	1559.5	1528.1	1500.4	1475.3
27.5°	1555.7	1584.6	1606.0	1617.3	1614.8	1597.2	1573.3	1538.1	1500.4	1464.0	1428.8
30°	1619.8	1634.9	1639.9	1631.1	1611.0	1582.1	1552.0	1511.8	1461.5	1416.3	1376.0
32.5°	1648.7	1633.7	1609.8	1585.9	1553.2	1528.1	1486.6	1442.6	1379.8	1325.8	1285.6
35°	1648.7	1588.4	1528.1	1477.8	1428.8	1397.4	1349.6	1290.6	1232.8	1187.5	1156.1
37.5°	1612.3	1496.7	1397.4	1315.7	1254.1	1220.2	1148.6	1095.8	1046.8	1031.7	1011.6
40°	1545.7	1374.8	1231.5	1124.7	1046.8	996.5	924.9	888.5	869.6	862.1	858.3
42.5°	1456.5	1239.1	1048.1	916.1	831.9	775.4	727.6	705.0	703.7	702.5	702.5
45°	1361.0	1093.3	869.6	712.5	638.4	588.1	565.5	556.7	564.2	563.0	564.2
47.5°	1301.9	982.7	706.2	539.1	482.6	449.9	438.6	442.3	448.6	446.1	446.1
50°	1294.4	926.2	596.9	419.7	377.0	360.7	358.1	358.1	361.9	359.4	358.1
52.5°	1322.0	917.4	540.4	360.7	326.7	312.9	310.4	309.1	307.9	300.3	294.1
55°	1369.8	937.5	524.0	345.6	310.4	295.3	291.5	289.0	284.0	274.0	262.6
57.5°	1465.3	1000.3	539.1	353.1	315.4	302.9	299.1	299.1	289.0	272.7	256.4
60°	1695.2	1159.9	600.7	382.0	339.3	326.7	329.2	328.0	312.9	289.0	263.9
62.5°	1991.8	1368.5	681.1	422.2	369.5	366.9	379.5	377.0	351.9	315.4	279.0
65°	2128.8	1466.5	703.7	431.0	375.7	387.0	412.2	409.7	378.3	328.0	281.5
66°	2131.3	1466.5	693.7	423.5	366.9	380.8	405.9	404.6	373.2	323.0	276.5
67.5°	2079.8	1426.3	664.8	408.4	349.4	359.4	382.0	380.8	351.9	310.4	266.4
70°	1886.2	1276.8	590.6	382.0	325.5	320.4	328.0	323.0	304.1	275.2	245.0
72.5°	1616.1	1071.9	515.2	361.9	309.1	289.0	284.0	280.2	265.2	248.8	230.0
75°	1273.0	848.2	452.4	346.8	294.1	267.7	258.9	253.8	243.8	232.5	217.4
77.5°	785.4	607.0	394.6	326.7	282.7	256.4	250.1	242.5	227.5	213.6	202.3
80°	350.6	375.7	324.2	285.3	252.6	228.7	218.7	207.3	192.3	183.5	177.2
82.5°	233.7	242.5	235.0	213.6	191.0	172.2	157.1	157.1	154.6	147.0	144.5
85°	149.5	150.8	145.8	131.9	123.2	111.8	105.6	106.8	111.8	110.6	109.3
87.5°	33.9	33.9	40.2	37.7	44.0	46.5	50.3	54.0	61.6	61.6	65.3
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: P156654

CATALOG NUMBER: TLM-F05-LED-E1-T4-7030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	1501.7	1501.7	1501.7	1501.7	1501.7
2.5°	1545.7	1548.2	1550.7	1546.9	1548.2
5°	1589.7	1588.4	1594.7	1590.9	1593.4
7.5°	1603.5	1604.7	1609.8	1609.8	1611.0
10°	1604.7	1607.3	1613.5	1617.3	1619.8
12.5°	1611.0	1616.1	1626.1	1628.6	1628.6
15°	1616.1	1618.6	1624.9	1627.4	1629.9
17.5°	1598.5	1593.4	1596.0	1597.2	1596.0
20°	1554.5	1549.5	1548.2	1543.2	1545.7
22.5°	1506.7	1492.9	1484.1	1474.1	1474.1
25°	1448.9	1427.6	1410.0	1392.4	1396.1
27.5°	1394.9	1367.2	1349.6	1338.3	1335.8
30°	1342.1	1313.2	1296.9	1283.0	1283.0
32.5°	1254.1	1234.0	1212.7	1203.9	1202.6
35°	1132.2	1119.7	1102.1	1098.3	1092.0
37.5°	995.3	991.5	976.4	975.2	968.9
40°	852.0	854.5	849.5	847.0	843.2
42.5°	708.8	721.3	718.8	717.6	715.0
45°	571.8	580.6	581.8	585.6	591.9
47.5°	449.9	452.4	454.9	453.7	454.9
50°	351.9	345.6	344.3	340.6	344.3
52.5°	284.0	274.0	268.9	263.9	261.4
55°	250.1	240.0	235.0	232.5	230.0
57.5°	241.3	231.2	223.7	218.7	217.4
60°	243.8	228.7	218.7	212.4	211.1
62.5°	250.1	230.0	216.1	209.9	208.6
65°	248.8	227.5	214.9	207.3	206.1
66°	245.0	224.9	212.4	206.1	204.8
67.5°	238.8	221.2	209.9	204.8	202.3
70°	227.5	216.1	207.3	201.1	198.6
72.5°	217.4	208.6	201.1	194.8	193.5
75°	206.1	198.6	191.0	186.0	184.7
77.5°	192.3	184.7	179.7	175.9	174.7
80°	169.6	164.6	159.6	154.6	154.6
82.5°	140.7	137.0	131.9	128.2	126.9
85°	108.1	108.1	104.3	100.5	99.3
87.5°	64.1	62.8	62.8	59.1	59.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)