

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: P155616

Luminaire Tested: **TLM-F05-LED-E1-T3-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P155616
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-F05-LED-E1-T3-7050
Description: TALON MEDIUM LED SITE LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (35) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13061.6 lumens
Efficiency: N/A
Efficacy: 98.0 lumens/watt
Spacing Criteria (0/90/45): 1.97 / 4.22 / 2.62
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')
CIE Type: Direct

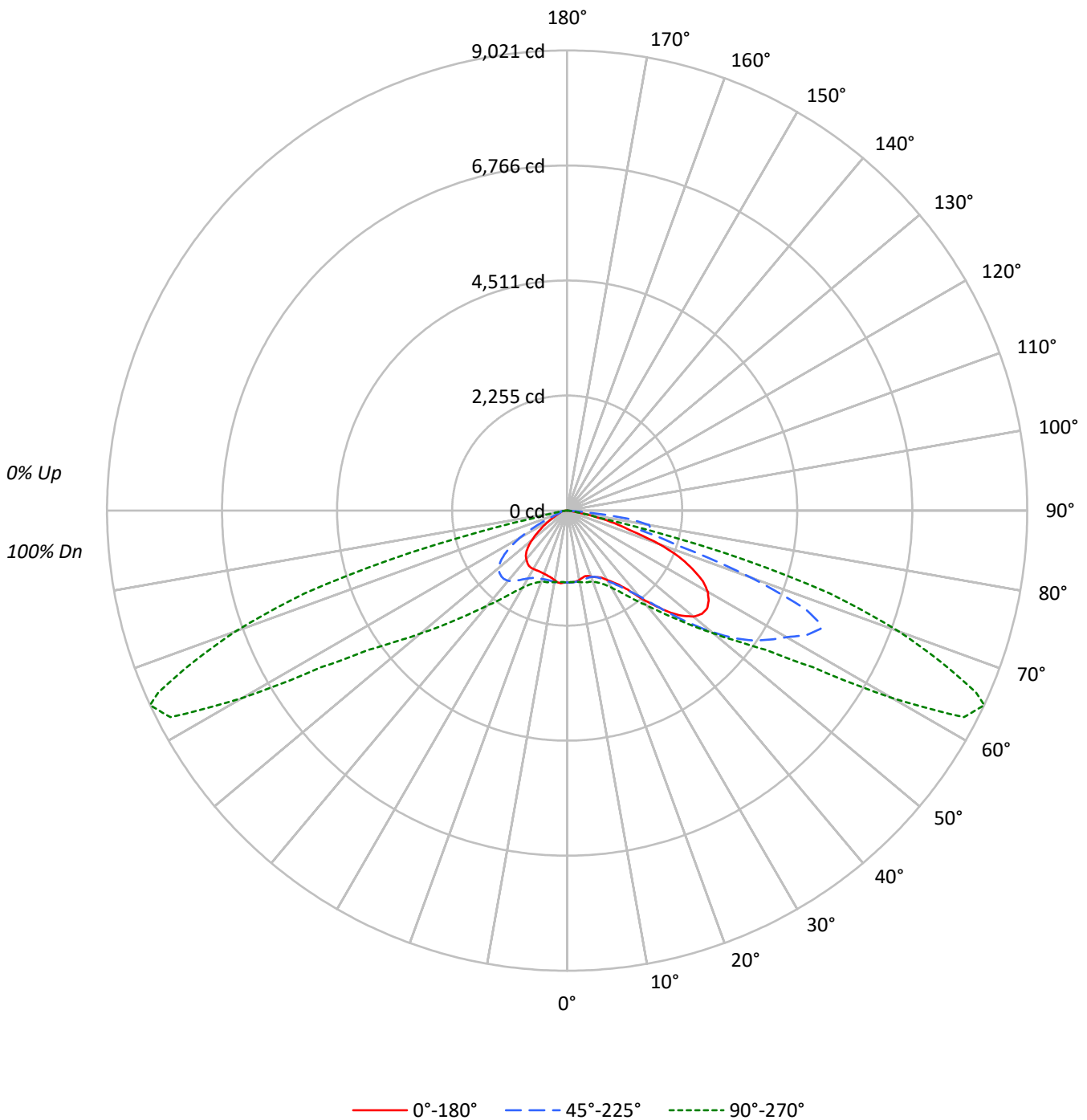
Input Watts (W): 133.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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CATALOG NUMBER: TLM-F05-LED-E1-T3-7050

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°	18255	18255	18255
5°	18324	18305	18599
10°	18163	18722	18275
15°	17893	19543	18007
20°	18997	20516	18179
25°	20605	22504	18747
30°	23488	26173	19809
35°	28163	32096	20831
40°	37715	41086	21080
45°	51527	54711	20637
50°	65199	75539	18144
55°	75748	107540	14427
60°	82537	190194	10948
65°	83310	276833	8276
70°	73018	262200	6905
75°	48243	158673	7075
80°	17610	16132	8327
85°	2946	10713	9240



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.8	1.0
10°-20°	397.9	3.0
20°-30°	683.8	5.2
30°-40°	1110.3	8.5
40°-50°	1853.7	14.2
50°-60°	2918.9	22.3
60°-70°	3980.2	30.5
70°-80°	1723.0	13.2
80°-90°	259.1	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°	1216.5	9.3
0°-40°	2326.8	17.8
0°-60°	7099.3	54.4
0°-90°	13061.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13061.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1408	1408	1408	1408	1408	
5°	1408	1410	1406	1423	1429	134
15°	1333	1388	1456	1413	1341	383
25°	1440	1448	1573	1460	1310	675
35°	1779	1818	2027	1669	1316	1152
45°	2810	2846	2983	1825	1125	2160
55°	3350	4437	4756	1504	638	2955
65°	2715	5485	9021	528	270	2636
75°	963	1499	3167	143	141	1029
85°	20	333	72	99	62	52
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°	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6
2.5°	1413.2	1418.9	1413.2	1414.6	1416.0	1414.6	1413.2	1413.2	1409.0	1411.8	1414.6
5°	1407.6	1411.8	1410.4	1411.8	1413.2	1411.8	1410.4	1411.8	1409.0	1410.4	1414.6
7.5°	1400.5	1399.1	1400.5	1403.3	1406.1	1406.1	1406.1	1407.6	1406.1	1406.1	1410.4
10°	1379.3	1380.7	1383.6	1387.8	1389.2	1393.4	1393.4	1397.7	1399.1	1401.9	1407.6
12.5°	1352.5	1353.9	1356.7	1359.6	1366.6	1373.7	1373.7	1383.6	1387.8	1394.9	1404.7
15°	1332.7	1334.1	1337.0	1339.8	1345.4	1352.5	1356.7	1368.0	1375.1	1387.8	1401.9
17.5°	1344.0	1342.6	1345.4	1346.9	1346.9	1352.5	1352.5	1361.0	1369.4	1380.7	1399.1
20°	1376.5	1376.5	1379.3	1379.3	1377.9	1380.7	1375.1	1375.1	1376.5	1382.1	1394.9
22.5°	1409.0	1407.6	1413.2	1416.0	1417.4	1421.7	1416.0	1414.6	1407.6	1403.3	1407.6
25°	1440.0	1438.6	1445.7	1449.9	1457.0	1461.2	1461.2	1461.2	1455.6	1448.5	1444.3
27.5°	1488.0	1488.0	1495.1	1499.3	1505.0	1513.4	1517.7	1517.7	1519.1	1509.2	1502.1
30°	1568.5	1569.9	1571.3	1577.0	1582.6	1585.4	1591.1	1595.3	1599.6	1593.9	1582.6
32.5°	1664.5	1656.0	1656.0	1664.5	1671.6	1680.0	1682.9	1688.5	1697.0	1692.7	1691.3
35°	1778.9	1776.0	1773.2	1776.0	1784.5	1794.4	1805.7	1815.6	1809.9	1818.4	1814.2
37.5°	1948.3	1951.1	1952.5	1952.5	1951.1	1953.9	1959.6	1969.5	1966.6	1969.5	1975.1
40°	2227.8	2217.9	2208.0	2209.5	2195.3	2198.2	2175.6	2185.5	2186.9	2177.0	2181.2
42.5°	2507.3	2513.0	2517.2	2528.5	2518.6	2513.0	2491.8	2491.8	2480.5	2470.6	2467.8
45°	2809.5	2820.8	2822.2	2844.8	2836.3	2854.6	2870.2	2865.9	2847.6	2846.2	2826.4
47.5°	3050.9	3069.2	3089.0	3115.8	3137.0	3177.9	3225.9	3249.9	3264.1	3275.4	3252.8
50°	3231.6	3240.1	3290.9	3333.2	3379.8	3447.6	3514.0	3600.1	3669.2	3701.7	3732.8
52.5°	3329.0	3350.2	3405.2	3471.6	3553.5	3655.1	3762.4	3899.4	4018.0	4097.0	4167.6
55°	3350.2	3371.4	3433.5	3518.2	3629.7	3766.7	3920.5	4106.9	4284.8	4437.3	4585.5
57.5°	3290.9	3314.9	3381.2	3478.7	3610.0	3776.5	3970.0	4214.2	4459.9	4706.9	4925.7
60°	3182.2	3211.8	3272.5	3368.5	3514.0	3701.7	3933.3	4239.6	4584.1	4962.5	5381.8
62.5°	3002.9	3033.9	3090.4	3196.3	3345.9	3553.5	3821.7	4202.9	4690.0	5285.8	6029.8
65°	2714.9	2729.0	2798.2	2905.5	3038.2	3266.9	3562.0	4022.2	4656.1	5484.8	6509.8
66°	2585.0	2609.0	2651.3	2737.5	2864.5	3079.1	3375.6	3842.9	4527.6	5415.6	6497.1
67.5°	2381.7	2400.0	2428.3	2486.2	2563.8	2721.9	3002.9	3444.8	4135.1	5065.5	6227.4
70°	1925.7	1934.2	1972.3	1992.0	2018.9	2071.1	2172.7	2426.9	2964.8	3838.7	5026.0
72.5°	1313.0	1337.0	1377.9	1434.4	1507.8	1578.4	1626.4	1658.9	1774.6	2289.9	3348.8
75°	962.8	988.3	1040.5	1115.3	1243.8	1390.6	1543.1	1613.7	1565.7	1499.3	1865.0
77.5°	559.1	593.0	636.7	708.7	827.3	1022.1	1283.3	1514.9	1671.6	1681.4	1596.7
80°	235.8	240.0	266.8	303.5	376.9	513.9	717.2	1050.4	1397.7	1632.0	1687.1
82.5°	53.6	66.4	84.7	100.2	122.8	169.4	251.3	417.9	755.3	1184.5	1544.5
85°	19.8	19.8	26.8	39.5	45.2	50.8	66.4	105.9	180.7	333.2	694.6
87.5°	0.0	1.4	2.8	2.8	5.6	7.1	11.3	15.5	14.1	12.7	42.4
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):

	55°	60°	65°	67.5°	70°	75°	80°	85°	90°	95°	100°
0°	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6
2.5°	1411.8	1410.4	1407.6	1407.6	1407.6	1407.6	1404.7	1406.1	1403.3	1404.7	1404.7
5°	1410.4	1410.4	1409.0	1406.1	1407.6	1407.6	1409.0	1406.1	1406.1	1407.6	1406.1
7.5°	1410.4	1409.0	1409.0	1409.0	1410.4	1409.0	1410.4	1410.4	1410.4	1411.8	1411.8
10°	1410.4	1410.4	1413.2	1414.6	1414.6	1416.0	1420.3	1420.3	1421.7	1423.1	1425.9
12.5°	1411.8	1417.4	1421.7	1425.9	1427.3	1430.1	1437.2	1437.2	1440.0	1444.3	1445.7
15°	1413.2	1421.7	1430.1	1433.0	1435.8	1441.4	1448.5	1451.3	1455.6	1459.8	1462.6
17.5°	1411.8	1423.1	1433.0	1437.2	1441.4	1448.5	1457.0	1459.8	1465.4	1471.1	1476.7
20°	1410.4	1425.9	1441.4	1447.1	1452.7	1462.6	1473.9	1481.0	1486.6	1495.1	1500.7
22.5°	1418.9	1437.2	1458.4	1466.9	1476.7	1489.4	1505.0	1513.4	1520.5	1529.0	1533.2
25°	1445.7	1459.8	1485.2	1499.3	1512.0	1533.2	1554.4	1564.3	1572.7	1579.8	1581.2
27.5°	1490.9	1495.1	1526.1	1544.5	1562.9	1596.7	1622.1	1629.2	1644.7	1650.4	1649.0
30°	1564.3	1557.2	1582.6	1610.9	1637.7	1684.3	1715.3	1733.7	1747.8	1747.8	1736.5
32.5°	1670.2	1658.9	1665.9	1698.4	1729.4	1797.2	1833.9	1857.9	1867.8	1865.0	1841.0
35°	1808.5	1801.4	1797.2	1822.6	1872.0	1951.1	1999.1	2011.8	2027.3	2024.5	1993.5
37.5°	1972.3	1966.6	1966.6	1996.3	2044.3	2161.5	2213.7	2222.2	2220.7	2198.2	2140.3
40°	2165.7	2162.9	2150.2	2167.1	2208.0	2360.5	2431.1	2442.4	2426.9	2390.2	2322.4
42.5°	2443.8	2426.9	2387.3	2397.2	2428.3	2576.5	2668.3	2699.3	2683.8	2647.1	2537.0
45°	2806.6	2788.3	2721.9	2713.5	2730.4	2860.3	2978.9	2985.9	2983.1	2936.5	2806.6
47.5°	3233.0	3204.8	3134.2	3111.6	3105.9	3225.9	3340.3	3351.6	3344.5	3275.4	3101.7
50°	3694.7	3653.7	3607.1	3591.6	3569.0	3655.1	3770.9	3772.3	3744.1	3648.1	3485.7
52.5°	4187.4	4173.3	4164.8	4149.3	4139.4	4214.2	4284.8	4242.4	4200.1	4099.8	3958.7
55°	4684.3	4742.2	4801.5	4807.2	4824.1	4904.6	4903.2	4787.4	4756.3	4701.3	4561.5
57.5°	5212.3	5426.9	5613.3	5671.2	5727.6	5877.3	5863.2	5748.8	5709.3	5641.5	5525.8
60°	5930.9	6509.8	7047.7	7176.1	7265.1	7444.4	7427.4	7251.0	7332.9	7327.2	7177.6
62.5°	6937.5	7900.4	8706.5	8904.2	8966.3	8986.1	8878.8	8688.2	8768.6	8859.0	8398.8
65°	7619.4	8751.7	9579.0	9731.5	9740.0	9504.2	9265.6	9041.1	9021.4	8943.7	8285.8
66°	7635.0	8794.1	9624.2	9772.4	9720.2	9398.3	9096.2	8870.3	8772.9	8602.1	7920.2
67.5°	7361.1	8530.1	9423.7	9580.4	9466.1	9010.1	8593.6	8302.8	8112.2	7835.4	7234.0
70°	6182.2	7341.3	8442.5	8734.8	8771.5	8091.0	7513.6	7171.9	6915.0	6535.2	6017.1
72.5°	4596.8	5644.3	6615.7	6895.2	7037.8	6494.2	6007.2	5747.4	5395.9	4996.3	4627.9
75°	2881.5	3621.2	4272.1	4468.3	4334.2	3913.5	3621.2	3512.5	3166.7	2928.1	2760.1
77.5°	1647.6	1879.1	1931.3	1856.5	1698.4	1300.3	924.7	684.7	594.4	657.9	725.7
80°	1608.0	1473.9	1174.6	1033.4	936.0	643.8	378.4	259.8	216.0	221.7	240.0
82.5°	1742.2	1869.2	1538.9	1255.1	1053.2	711.5	392.5	208.9	141.2	166.6	187.8
85°	1132.3	1575.6	1418.9	1195.8	968.5	608.5	323.3	108.7	72.0	94.6	129.9
87.5°	114.4	125.6	107.3	145.4	108.7	50.8	25.4	15.5	14.1	16.9	25.4
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):

	105°	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°
0°	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6	1407.6
2.5°	1406.1	1406.1	1407.6	1409.0	1410.4	1411.8	1411.8	1411.8	1411.8	1414.6	1413.2
5°	1409.0	1411.8	1414.6	1416.0	1418.9	1418.9	1423.1	1421.7	1421.7	1425.9	1427.3
7.5°	1414.6	1418.9	1424.5	1423.1	1428.7	1427.3	1430.1	1430.1	1425.9	1427.3	1424.5
10°	1427.3	1433.0	1435.8	1431.6	1433.0	1427.3	1425.9	1418.9	1410.4	1406.1	1400.5
12.5°	1448.5	1454.1	1454.1	1447.1	1438.6	1425.9	1416.0	1400.5	1387.8	1380.7	1373.7
15°	1466.9	1472.5	1471.1	1459.8	1447.1	1427.3	1413.2	1394.9	1376.5	1365.2	1358.1
17.5°	1481.0	1483.8	1479.6	1464.0	1449.9	1431.6	1417.4	1397.7	1376.5	1362.4	1349.7
20°	1502.1	1499.3	1489.4	1469.7	1454.1	1437.2	1425.9	1409.0	1385.0	1366.6	1348.3
22.5°	1533.2	1521.9	1503.6	1482.4	1466.9	1451.3	1440.0	1421.7	1397.7	1375.1	1353.9
25°	1574.1	1551.6	1526.1	1503.6	1489.4	1472.5	1459.8	1440.0	1414.6	1389.2	1363.8
27.5°	1633.4	1593.9	1561.4	1541.7	1526.1	1505.0	1489.4	1464.0	1437.2	1407.6	1379.3
30°	1699.8	1646.2	1615.1	1599.6	1582.6	1560.0	1536.0	1503.6	1472.5	1440.0	1406.1
32.5°	1785.9	1721.0	1691.3	1675.8	1653.2	1625.0	1596.7	1560.0	1516.3	1473.9	1433.0
35°	1898.9	1832.5	1801.4	1777.4	1746.4	1709.7	1668.7	1619.3	1560.0	1503.6	1451.3
37.5°	2020.3	1948.3	1918.6	1893.2	1846.6	1798.6	1740.7	1668.7	1588.3	1513.4	1448.5
40°	2174.2	2107.8	2069.7	2025.9	1970.9	1887.6	1797.2	1692.7	1589.7	1497.9	1421.7
42.5°	2369.0	2302.6	2246.2	2177.0	2081.0	1952.5	1824.0	1688.5	1564.3	1459.8	1377.9
45°	2627.3	2546.9	2449.5	2328.0	2172.7	1993.5	1825.4	1661.7	1516.3	1400.5	1313.0
47.5°	2943.6	2820.8	2661.2	2456.5	2233.5	2004.7	1802.9	1608.0	1441.4	1315.8	1218.4
50°	3319.1	3125.7	2863.1	2562.4	2264.5	1987.8	1746.4	1527.6	1335.6	1201.4	1085.7
52.5°	3748.3	3432.1	3045.2	2638.6	2263.1	1931.3	1650.4	1406.1	1197.2	1047.6	937.4
55°	4252.3	3782.2	3233.0	2695.1	2223.6	1826.9	1503.6	1235.3	1026.4	888.0	786.4
57.5°	4990.7	4349.7	3560.5	2782.6	2144.5	1665.9	1304.5	1030.6	847.1	715.8	629.7
60°	6340.4	5297.0	4150.7	2959.1	2023.1	1430.1	1071.6	811.8	657.9	552.0	494.1
62.5°	7356.9	6029.8	4469.7	2919.6	1778.9	1139.3	794.8	591.5	484.2	412.2	375.5
65°	7211.4	5802.5	4129.5	2514.4	1394.9	803.3	528.0	402.4	333.2	299.3	278.1
66°	6882.5	5506.0	3834.4	2263.1	1205.7	667.8	434.8	337.4	286.6	262.6	248.5
67.5°	6258.5	4955.4	3306.4	1855.1	926.1	484.2	327.5	266.8	232.9	223.1	213.2
70°	5202.5	3951.6	2321.0	1080.0	473.0	269.7	207.5	186.4	177.9	176.5	173.7
72.5°	3986.9	2796.8	1366.6	511.1	245.7	179.3	160.9	153.9	151.1	151.1	152.5
75°	2443.8	1571.3	604.2	249.9	172.2	151.1	142.6	139.8	138.4	139.8	138.4
77.5°	816.0	499.8	258.4	189.2	156.7	139.8	134.1	131.3	131.3	131.3	131.3
80°	249.9	217.4	197.7	175.1	148.2	132.7	124.2	122.8	124.2	125.6	121.4
82.5°	187.8	177.9	166.6	155.3	134.1	118.6	115.8	115.8	115.8	111.5	105.9
85°	138.4	136.9	112.9	105.9	98.8	98.8	98.8	98.8	94.6	87.5	81.9
87.5°	25.4	24.0	25.4	26.8	39.5	42.4	42.4	45.2	49.4	46.6	46.6
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: P155616

CATALOG NUMBER: TLM-F05-LED-E1-T3-7050

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	1407.6	1407.6	1407.6	1407.6	1407.6
2.5°	1413.2	1411.8	1416.0	1413.2	1414.6
5°	1425.9	1424.5	1427.3	1424.5	1428.7
7.5°	1421.7	1418.9	1417.4	1418.9	1420.3
10°	1392.0	1389.2	1387.8	1386.4	1387.8
12.5°	1366.6	1361.0	1361.0	1358.1	1359.6
15°	1348.3	1344.0	1342.6	1339.8	1341.2
17.5°	1339.8	1332.7	1329.9	1327.1	1327.1
20°	1334.1	1325.7	1321.4	1318.6	1317.2
22.5°	1334.1	1321.4	1315.8	1313.0	1311.6
25°	1339.8	1324.3	1315.8	1311.6	1310.1
27.5°	1351.1	1331.3	1321.4	1315.8	1315.8
30°	1370.9	1345.4	1331.3	1324.3	1322.8
32.5°	1390.6	1356.7	1337.0	1328.5	1325.7
35°	1400.5	1356.7	1332.7	1318.6	1315.8
37.5°	1389.2	1338.4	1308.7	1287.6	1283.3
40°	1353.9	1300.3	1267.8	1248.0	1245.2
42.5°	1307.3	1255.1	1217.0	1202.8	1198.6
45°	1243.8	1181.7	1143.6	1123.8	1125.2
47.5°	1135.1	1071.6	1037.7	1019.3	1022.1
50°	1006.6	944.5	914.8	895.1	899.3
52.5°	865.4	809.0	780.7	770.8	768.0
55°	717.2	673.4	653.7	642.4	638.1
57.5°	581.7	550.6	536.5	522.4	523.8
60°	458.8	443.3	439.1	423.5	422.1
62.5°	361.4	351.5	347.3	336.0	337.4
65°	273.9	271.1	273.9	266.8	269.7
66°	247.1	248.5	248.5	244.2	247.1
67.5°	213.2	216.0	220.2	216.0	218.8
70°	176.5	179.3	182.1	182.1	182.1
72.5°	153.9	156.7	158.1	158.1	158.1
75°	141.2	142.6	144.0	141.2	141.2
77.5°	132.7	132.7	129.9	128.5	127.1
80°	120.0	118.6	114.4	111.5	111.5
82.5°	100.2	97.4	94.6	90.4	90.4
85°	76.2	73.4	70.6	64.9	62.1
87.5°	39.5	40.9	39.5	32.5	28.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)