

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: P155615

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P155615
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
Description: TALON MEDIUM LED SITE LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 3
Light Source: (35) 4000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

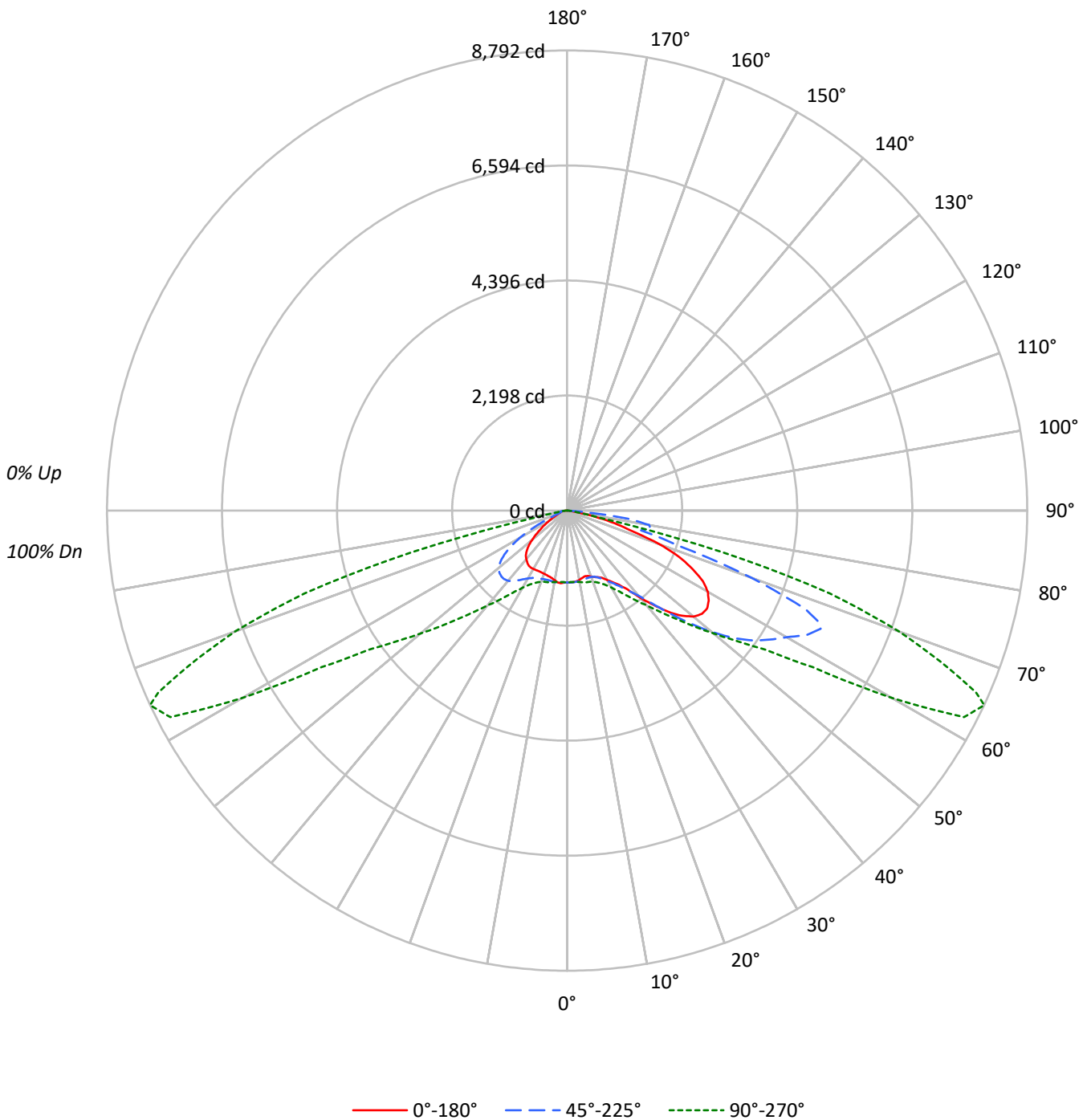
Lumens per Lamp: N/A
Luminaire Lumens: 12729.3 lumens
Efficiency: N/A
Efficacy: 95.5 lumens/watt
Spacing Criteria (0/90/45): 1.97 / 4.22 / 2.62
Luminous Opening: Rectangular (W 0.83' x L: 1' x H: 0')
CIE Type: Direct

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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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°	17789	17789	17789
5°	17857	17840	18126
10°	17701	18245	17811
15°	17438	19045	17549
20°	18514	19995	17716
25°	20082	21932	18270
30°	22891	25507	19306
35°	27446	31280	20301
40°	36755	40039	20544
45°	50216	53319	20112
50°	63541	73616	17682
55°	73822	104804	14061
60°	80436	185355	10671
65°	81190	269787	8064
70°	71160	255526	6730
75°	47015	154634	6895
80°	17162	15721	8118
85°	2872	10446	9002



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.4	1.0
10°-20°	387.7	3.0
20°-30°	666.4	5.2
30°-40°	1082.1	8.5
40°-50°	1806.5	14.2
50°-60°	2844.6	22.3
60°-70°	3878.9	30.5
70°-80°	1679.1	13.2
80°-90°	252.5	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°	1185.6	9.3
0°-40°	2267.6	17.8
0°-60°	6918.7	54.4
0°-90°	12729.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12729.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1372	1372	1372	1372	1372	
5°	1372	1374	1370	1387	1392	130
15°	1299	1352	1418	1377	1307	373
25°	1403	1412	1533	1423	1277	658
35°	1734	1772	1976	1626	1282	1123
45°	2738	2774	2907	1779	1097	2105
55°	3265	4324	4635	1465	622	2880
65°	2646	5345	8792	515	263	2569
75°	938	1461	3086	139	138	1003
85°	19	325	70	96	60	51
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°	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7
2.5°	1377.3	1382.8	1377.3	1378.6	1380.0	1378.6	1377.3	1377.3	1373.1	1375.9	1378.6
5°	1371.7	1375.9	1374.5	1375.9	1377.3	1375.9	1374.5	1375.9	1373.1	1374.5	1378.6
7.5°	1364.9	1363.5	1364.9	1367.6	1370.4	1370.4	1370.4	1371.7	1370.4	1370.4	1374.5
10°	1344.2	1345.6	1348.4	1352.5	1353.9	1358.0	1358.0	1362.1	1363.5	1366.2	1371.7
12.5°	1318.1	1319.5	1322.2	1325.0	1331.8	1338.7	1338.7	1348.4	1352.5	1359.4	1369.0
15°	1298.8	1300.2	1303.0	1305.7	1311.2	1318.1	1322.2	1333.2	1340.1	1352.5	1366.2
17.5°	1309.8	1308.5	1311.2	1312.6	1312.6	1318.1	1318.1	1326.3	1334.6	1345.6	1363.5
20°	1341.5	1341.5	1344.2	1344.2	1342.9	1345.6	1340.1	1340.1	1341.5	1347.0	1359.4
22.5°	1373.1	1371.7	1377.3	1380.0	1381.4	1385.5	1380.0	1378.6	1371.7	1367.6	1371.7
25°	1403.4	1402.0	1408.9	1413.0	1419.9	1424.0	1424.0	1424.0	1418.5	1411.6	1407.5
27.5°	1450.2	1450.2	1457.1	1461.2	1466.7	1474.9	1479.1	1479.1	1480.4	1470.8	1463.9
30°	1528.6	1530.0	1531.3	1536.9	1542.4	1545.1	1550.6	1554.7	1558.9	1553.4	1542.4
32.5°	1622.2	1613.9	1613.9	1622.2	1629.0	1637.3	1640.0	1645.5	1653.8	1649.7	1648.3
35°	1733.6	1730.9	1728.1	1730.9	1739.1	1748.7	1759.7	1769.4	1763.9	1772.1	1768.0
37.5°	1898.7	1901.5	1902.8	1902.8	1901.5	1904.2	1909.7	1919.3	1916.6	1919.3	1924.8
40°	2171.1	2161.5	2151.9	2153.2	2139.5	2142.2	2120.2	2129.9	2131.2	2121.6	2125.7
42.5°	2443.6	2449.1	2453.2	2464.2	2454.6	2449.1	2428.4	2428.4	2417.4	2407.8	2405.0
45°	2738.0	2749.0	2750.4	2772.4	2764.1	2782.0	2797.2	2793.0	2775.1	2773.8	2754.5
47.5°	2973.3	2991.2	3010.4	3036.6	3057.2	3097.1	3143.9	3167.3	3181.0	3192.0	3170.0
50°	3149.4	3157.6	3207.2	3248.4	3293.8	3359.9	3424.6	3508.5	3575.9	3607.5	3637.8
52.5°	3244.3	3265.0	3318.6	3383.3	3463.1	3562.1	3666.7	3800.2	3915.7	3992.8	4061.6
55°	3265.0	3285.6	3346.1	3428.7	3537.4	3670.8	3820.8	4002.4	4175.8	4324.4	4468.8
57.5°	3207.2	3230.6	3295.2	3390.2	3518.1	3680.5	3869.0	4107.0	4346.4	4587.2	4800.4
60°	3101.2	3130.1	3189.3	3282.8	3424.6	3607.5	3833.2	4131.8	4467.5	4836.2	5244.8
62.5°	2926.5	2956.8	3011.8	3115.0	3260.8	3463.1	3724.5	4096.0	4570.7	5151.3	5876.4
65°	2645.8	2659.6	2727.0	2831.6	2960.9	3183.8	3471.3	3919.9	4537.6	5345.3	6344.2
66°	2519.2	2542.6	2583.9	2667.8	2791.7	3000.8	3289.7	3745.1	4412.4	5277.9	6331.8
67.5°	2321.1	2339.0	2366.5	2422.9	2498.6	2652.7	2926.5	3357.1	4029.9	4936.6	6069.0
70°	1876.7	1884.9	1922.1	1941.4	1967.5	2018.4	2117.5	2365.1	2889.3	3741.0	4898.1
72.5°	1279.6	1303.0	1342.9	1397.9	1469.4	1538.2	1585.0	1616.7	1729.5	2231.7	3263.6
75°	938.3	963.1	1014.0	1086.9	1212.1	1355.2	1503.8	1572.6	1525.8	1461.2	1817.5
77.5°	544.8	577.9	620.5	690.7	806.3	996.1	1250.7	1476.3	1629.0	1638.7	1556.1
80°	229.8	233.9	260.0	295.8	367.4	500.8	698.9	1023.7	1362.1	1590.5	1644.2
82.5°	52.3	64.7	82.6	97.7	119.7	165.1	244.9	407.3	736.1	1154.4	1505.2
85°	19.3	19.3	26.1	38.5	44.0	49.5	64.7	103.2	176.1	324.7	676.9
87.5°	0.0	1.4	2.8	2.8	5.5	6.9	11.0	15.1	13.8	12.4	41.3
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°	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7
2.5°	1375.9	1374.5	1371.7	1371.7	1371.7	1371.7	1369.0	1370.4	1367.6	1369.0	1369.0
5°	1374.5	1374.5	1373.1	1370.4	1371.7	1371.7	1373.1	1370.4	1370.4	1371.7	1370.4
7.5°	1374.5	1373.1	1373.1	1373.1	1374.5	1373.1	1374.5	1374.5	1374.5	1375.9	1375.9
10°	1374.5	1374.5	1377.3	1378.6	1378.6	1380.0	1384.1	1384.1	1385.5	1386.9	1389.6
12.5°	1375.9	1381.4	1385.5	1389.6	1391.0	1393.8	1400.6	1400.6	1403.4	1407.5	1408.9
15°	1377.3	1385.5	1393.8	1396.5	1399.3	1404.8	1411.6	1414.4	1418.5	1422.7	1425.4
17.5°	1375.9	1386.9	1396.5	1400.6	1404.8	1411.6	1419.9	1422.7	1428.2	1433.7	1439.2
20°	1374.5	1389.6	1404.8	1410.3	1415.8	1425.4	1436.4	1443.3	1448.8	1457.1	1462.6
22.5°	1382.8	1400.6	1421.3	1429.5	1439.2	1451.5	1466.7	1474.9	1481.8	1490.1	1494.2
25°	1408.9	1422.7	1447.4	1461.2	1473.6	1494.2	1514.8	1524.5	1532.7	1539.6	1541.0
27.5°	1452.9	1457.1	1487.3	1505.2	1523.1	1556.1	1580.9	1587.8	1602.9	1608.4	1607.0
30°	1524.5	1517.6	1542.4	1569.9	1596.0	1641.4	1671.7	1689.6	1703.3	1703.3	1692.3
32.5°	1627.7	1616.7	1623.5	1655.2	1685.4	1751.5	1787.3	1810.7	1820.3	1817.5	1794.1
35°	1762.5	1755.6	1751.5	1776.3	1824.4	1901.5	1948.2	1960.6	1975.8	1973.0	1942.7
37.5°	1922.1	1916.6	1916.6	1945.5	1992.3	2106.5	2157.4	2165.6	2164.3	2142.2	2085.8
40°	2110.6	2107.8	2095.5	2112.0	2151.9	2300.5	2369.3	2380.3	2365.1	2329.4	2263.3
42.5°	2381.6	2365.1	2326.6	2336.2	2366.5	2511.0	2600.4	2630.7	2615.5	2579.8	2472.4
45°	2735.2	2717.4	2652.7	2644.4	2660.9	2787.5	2903.1	2910.0	2907.2	2861.8	2735.2
47.5°	3150.8	3123.2	3054.4	3032.4	3026.9	3143.9	3255.3	3266.3	3259.4	3192.0	3022.8
50°	3600.7	3560.8	3515.4	3500.2	3478.2	3562.1	3675.0	3676.3	3648.8	3555.3	3397.0
52.5°	4080.8	4067.1	4058.8	4043.7	4034.1	4107.0	4175.8	4134.5	4093.2	3995.5	3858.0
55°	4565.2	4621.6	4679.4	4684.9	4701.4	4779.8	4778.4	4665.6	4635.3	4581.7	4445.5
57.5°	5079.7	5288.9	5470.5	5526.9	5581.9	5727.8	5714.0	5602.6	5564.0	5498.0	5385.2
60°	5780.1	6344.2	6868.4	6993.6	7080.3	7255.0	7238.5	7066.5	7146.3	7140.8	6994.9
62.5°	6761.0	7699.4	8485.0	8677.6	8738.2	8757.4	8652.9	8467.1	8545.6	8633.6	8185.1
65°	7425.6	8529.0	9335.3	9483.9	9492.2	9262.4	9029.9	8811.1	8791.8	8716.2	8075.0
66°	7440.7	8570.3	9379.3	9523.8	9472.9	9159.2	8864.8	8644.6	8549.7	8383.2	7718.7
67.5°	7173.8	8313.0	9184.0	9336.7	9225.2	8780.8	8375.0	8091.5	7905.8	7636.1	7050.0
70°	6025.0	7154.5	8227.7	8512.5	8548.3	7885.1	7322.4	6989.4	6739.0	6368.9	5864.0
72.5°	4479.8	5500.7	6447.3	6719.8	6858.7	6329.0	5854.3	5601.2	5258.6	4869.2	4510.1
75°	2808.2	3529.1	4163.4	4354.6	4223.9	3813.9	3529.1	3423.2	3086.1	2853.6	2689.8
77.5°	1605.6	1831.3	1882.2	1809.3	1655.2	1267.2	901.2	667.3	579.2	641.2	707.2
80°	1567.1	1436.4	1144.7	1007.1	912.2	627.4	368.7	253.2	210.5	216.0	233.9
82.5°	1697.8	1821.7	1499.7	1223.2	1026.4	693.4	382.5	203.6	137.6	162.4	183.0
85°	1103.5	1535.5	1382.8	1165.4	943.9	593.0	315.1	105.9	70.2	92.2	126.6
87.5°	111.4	122.5	104.6	141.7	105.9	49.5	24.8	15.1	13.8	16.5	24.8
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°	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7	1371.7
2.5°	1370.4	1370.4	1371.7	1373.1	1374.5	1375.9	1375.9	1375.9	1375.9	1378.6	1377.3
5°	1373.1	1375.9	1378.6	1380.0	1382.8	1382.8	1386.9	1385.5	1385.5	1389.6	1391.0
7.5°	1378.6	1382.8	1388.3	1386.9	1392.4	1391.0	1393.8	1393.8	1389.6	1391.0	1388.3
10°	1391.0	1396.5	1399.3	1395.1	1396.5	1391.0	1389.6	1382.8	1374.5	1370.4	1364.9
12.5°	1411.6	1417.2	1417.2	1410.3	1402.0	1389.6	1380.0	1364.9	1352.5	1345.6	1338.7
15°	1429.5	1435.0	1433.7	1422.7	1410.3	1391.0	1377.3	1359.4	1341.5	1330.5	1323.6
17.5°	1443.3	1446.0	1441.9	1426.8	1413.0	1395.1	1381.4	1362.1	1341.5	1327.7	1315.3
20°	1463.9	1461.2	1451.5	1432.3	1417.2	1400.6	1389.6	1373.1	1349.7	1331.8	1314.0
22.5°	1494.2	1483.2	1465.3	1444.7	1429.5	1414.4	1403.4	1385.5	1362.1	1340.1	1319.5
25°	1534.1	1512.1	1487.3	1465.3	1451.5	1435.0	1422.7	1403.4	1378.6	1353.9	1329.1
27.5°	1591.9	1553.4	1521.7	1502.5	1487.3	1466.7	1451.5	1426.8	1400.6	1371.7	1344.2
30°	1656.6	1604.3	1574.0	1558.9	1542.4	1520.3	1497.0	1465.3	1435.0	1403.4	1370.4
32.5°	1740.5	1677.2	1648.3	1633.2	1611.1	1583.6	1556.1	1520.3	1477.7	1436.4	1396.5
35°	1850.6	1785.9	1755.6	1732.2	1702.0	1666.2	1626.3	1578.1	1520.3	1465.3	1414.4
37.5°	1968.9	1898.7	1869.8	1845.0	1799.6	1752.9	1696.5	1626.3	1547.9	1474.9	1411.6
40°	2118.8	2054.2	2017.0	1974.4	1920.7	1839.5	1751.5	1649.7	1549.2	1459.8	1385.5
42.5°	2308.7	2244.1	2189.0	2121.6	2028.0	1902.8	1777.6	1645.5	1524.5	1422.7	1342.9
45°	2560.5	2482.1	2387.1	2268.8	2117.5	1942.7	1779.0	1619.4	1477.7	1364.9	1279.6
47.5°	2868.7	2749.0	2593.5	2394.0	2176.6	1953.7	1757.0	1567.1	1404.8	1282.3	1187.4
50°	3234.7	3046.2	2790.3	2497.2	2206.9	1937.2	1702.0	1488.7	1301.6	1170.9	1058.0
52.5°	3652.9	3344.8	2967.8	2571.5	2205.5	1882.2	1608.4	1370.4	1166.7	1020.9	913.6
55°	4144.1	3686.0	3150.8	2626.5	2167.0	1780.4	1465.3	1203.9	1000.3	865.4	766.4
57.5°	4863.7	4239.1	3470.0	2711.8	2090.0	1623.5	1271.3	1004.4	825.5	697.6	613.6
60°	6179.1	5162.3	4045.1	2883.8	1971.6	1393.8	1044.3	791.1	641.2	538.0	481.6
62.5°	7169.7	5876.4	4356.0	2845.3	1733.6	1110.3	774.6	576.5	471.9	401.8	366.0
65°	7028.0	5654.8	4024.4	2450.4	1359.4	782.9	514.6	392.1	324.7	291.7	271.0
66°	6707.4	5365.9	3736.9	2205.5	1175.0	650.8	423.8	328.8	279.3	255.9	242.2
67.5°	6099.3	4829.3	3222.3	1807.9	902.6	471.9	319.2	260.0	227.0	217.4	207.8
70°	5070.1	3851.1	2261.9	1052.5	460.9	262.8	202.3	181.6	173.4	172.0	169.2
72.5°	3885.5	2725.6	1331.8	498.1	239.4	174.7	156.8	150.0	147.2	147.2	148.6
75°	2381.6	1531.3	588.9	243.5	167.9	147.2	139.0	136.2	134.8	136.2	134.8
77.5°	795.3	487.1	251.8	184.4	152.7	136.2	130.7	128.0	128.0	128.0	128.0
80°	243.5	211.9	192.6	170.6	144.5	129.3	121.1	119.7	121.1	122.5	118.3
82.5°	183.0	173.4	162.4	151.3	130.7	115.6	112.8	112.8	112.8	108.7	103.2
85°	134.8	133.5	110.1	103.2	96.3	96.3	96.3	96.3	92.2	85.3	79.8
87.5°	24.8	23.4	24.8	26.1	38.5	41.3	41.3	44.0	48.2	45.4	45.4
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: P155615

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

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	1371.7	1371.7	1371.7	1371.7	1371.7
2.5°	1377.3	1375.9	1380.0	1377.3	1378.6
5°	1389.6	1388.3	1391.0	1388.3	1392.4
7.5°	1385.5	1382.8	1381.4	1382.8	1384.1
10°	1356.6	1353.9	1352.5	1351.1	1352.5
12.5°	1331.8	1326.3	1326.3	1323.6	1325.0
15°	1314.0	1309.8	1308.5	1305.7	1307.1
17.5°	1305.7	1298.8	1296.1	1293.3	1293.3
20°	1300.2	1291.9	1287.8	1285.1	1283.7
22.5°	1300.2	1287.8	1282.3	1279.6	1278.2
25°	1305.7	1290.6	1282.3	1278.2	1276.8
27.5°	1316.7	1297.5	1287.8	1282.3	1282.3
30°	1336.0	1311.2	1297.5	1290.6	1289.2
32.5°	1355.2	1322.2	1303.0	1294.7	1291.9
35°	1364.9	1322.2	1298.8	1285.1	1282.3
37.5°	1353.9	1304.3	1275.4	1254.8	1250.7
40°	1319.5	1267.2	1235.5	1216.3	1213.5
42.5°	1274.1	1223.2	1186.0	1172.2	1168.1
45°	1212.1	1151.6	1114.5	1095.2	1096.6
47.5°	1106.2	1044.3	1011.3	993.4	996.1
50°	981.0	920.5	891.6	872.3	876.4
52.5°	843.4	788.4	760.9	751.2	748.5
55°	698.9	656.3	637.0	626.0	621.9
57.5°	566.9	536.6	522.8	509.1	510.4
60°	447.2	432.0	427.9	412.8	411.4
62.5°	352.2	342.6	338.5	327.5	328.8
65°	266.9	264.2	266.9	260.0	262.8
66°	240.8	242.2	242.2	238.0	240.8
67.5°	207.8	210.5	214.6	210.5	213.3
70°	172.0	174.7	177.5	177.5	177.5
72.5°	150.0	152.7	154.1	154.1	154.1
75°	137.6	139.0	140.3	137.6	137.6
77.5°	129.3	129.3	126.6	125.2	123.8
80°	116.9	115.6	111.4	108.7	108.7
82.5°	97.7	94.9	92.2	88.1	88.1
85°	74.3	71.5	68.8	63.3	60.5
87.5°	38.5	39.9	38.5	31.6	27.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)