

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: P156653

Luminaire Tested: **TLM-F05-LED-E1-T4-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P156653
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-T4-8030
Description: TALON MEDIUM LED SITE LUMINAIRE
(5) LIGHTBARS WITH AccuLED OPTICS - TYPE 4
Light Source: (35) 3000K CCT, 80 CRI LEDs
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10527.8 lumens
Efficiency: N/A
Efficacy: 79.0 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

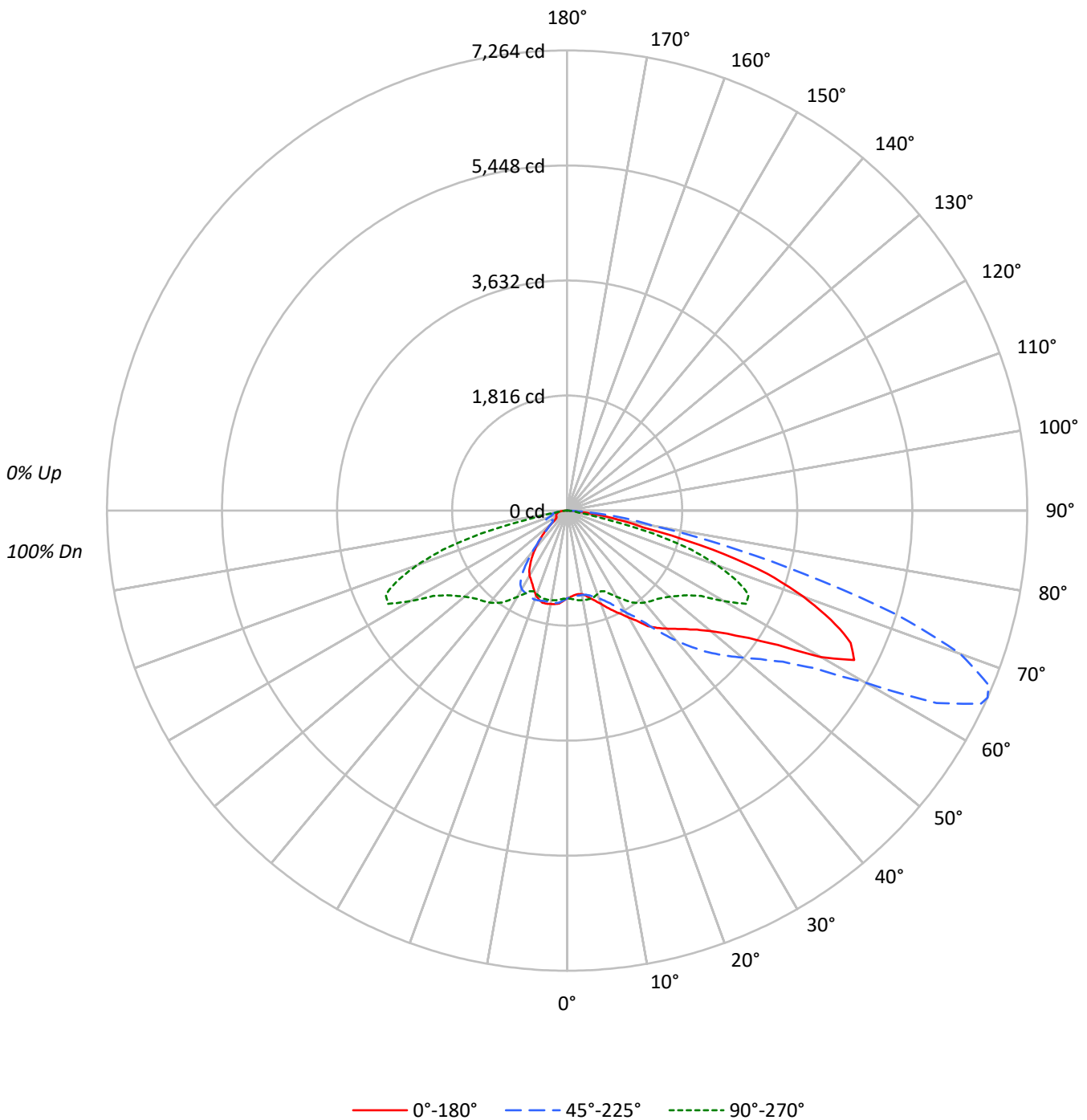
Input Watts (W): 133.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	17996	17996	17996
5°	17414	18383	19168
10°	17616	18931	19711
15°	19301	19317	20221
20°	21636	19360	19712
25°	25041	20122	18460
30°	29214	23563	17754
35°	35243	27981	15976
40°	41186	32122	13191
45°	48536	36354	10030
50°	59671	42639	6420
55°	79370	52616	4805
60°	119843	74152	5060
65°	151550	96923	5843
70°	150320	95768	6958
75°	119224	70926	8553
80°	60448	14914	10665
85°	8809	12261	13645



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.7	1.3
10°-20°	409.1	3.9
20°-30°	704.7	6.7
30°-40°	1066.2	10.1
40°-50°	1381.9	13.1
50°-60°	1905.2	18.1
60°-70°	2960.0	28.1
70°-80°	1721.3	16.3
80°-90°	244.8	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°	1248.6	11.9
0°-40°	2314.7	22.0
0°-60°	5601.8	53.2
0°-90°	10527.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10527.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1388	1388	1388	1388	1388	
5°	1338	1358	1412	1458	1472	128
15°	1438	1388	1439	1476	1506	412
25°	1750	1618	1406	1470	1290	816
35°	2226	2175	1767	1247	1009	1391
45°	2646	3168	1982	523	547	2068
55°	3510	4158	2327	269	212	3251
65°	4939	7210	3158	381	190	4674
75°	2379	3876	1416	239	171	2450
85°	59	404	82	98	92	256
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°	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7
2.5°	1362.1	1366.8	1363.3	1364.4	1364.4	1365.6	1365.6	1366.8	1365.6	1369.1	1371.4
5°	1337.7	1340.1	1338.9	1341.2	1343.5	1348.2	1347.0	1352.8	1354.0	1357.5	1363.3
7.5°	1328.4	1326.1	1327.3	1330.8	1333.1	1335.4	1337.7	1342.4	1345.9	1354.0	1358.6
10°	1337.7	1336.6	1337.7	1340.1	1340.1	1341.2	1338.9	1343.5	1345.9	1352.8	1357.5
12.5°	1376.1	1376.1	1373.7	1373.7	1371.4	1369.1	1363.3	1359.8	1358.6	1359.8	1362.1
15°	1437.6	1435.3	1430.6	1427.1	1422.5	1414.4	1406.2	1399.3	1394.6	1387.7	1385.3
17.5°	1498.0	1494.5	1489.9	1485.2	1479.4	1471.3	1458.5	1450.4	1437.6	1429.5	1424.8
20°	1567.7	1560.7	1554.9	1549.1	1537.5	1535.1	1522.4	1508.4	1493.3	1474.8	1472.4
22.5°	1658.2	1646.6	1639.7	1636.2	1624.6	1621.1	1600.2	1580.4	1561.8	1537.5	1531.7
25°	1750.0	1738.4	1734.9	1730.2	1722.1	1717.5	1697.7	1675.6	1651.3	1617.6	1610.6
27.5°	1839.4	1840.5	1831.3	1834.7	1832.4	1824.3	1804.5	1782.5	1763.9	1724.4	1716.3
30°	1950.9	1943.9	1939.2	1946.2	1938.1	1939.2	1921.8	1910.2	1880.0	1856.8	1840.5
32.5°	2067.0	2065.8	2072.8	2077.4	2076.3	2073.9	2060.0	2048.4	2021.7	1988.0	1981.1
35°	2226.1	2233.0	2238.8	2259.7	2259.7	2274.8	2260.9	2247.0	2215.6	2175.0	2161.0
37.5°	2334.1	2336.4	2359.6	2387.5	2422.3	2454.8	2464.1	2467.6	2454.8	2424.6	2403.7
40°	2432.8	2437.4	2474.6	2517.5	2568.6	2632.5	2670.8	2688.2	2691.7	2677.8	2632.5
42.5°	2531.5	2538.4	2576.8	2639.5	2710.3	2791.6	2858.9	2901.9	2926.3	2926.3	2899.6
45°	2646.4	2655.7	2697.5	2766.0	2848.5	2950.7	3043.6	3126.0	3165.5	3167.8	3142.3
47.5°	2782.3	2790.4	2839.2	2908.9	2993.6	3097.0	3214.3	3308.3	3381.5	3386.1	3365.2
50°	2957.6	2969.3	3009.9	3072.6	3159.7	3264.2	3381.5	3512.7	3589.3	3607.9	3585.9
52.5°	3189.9	3192.2	3225.9	3283.9	3368.7	3468.6	3592.8	3735.7	3836.7	3851.8	3815.8
55°	3510.4	3506.9	3529.0	3591.7	3655.5	3733.3	3862.2	4022.5	4135.1	4158.3	4121.2
57.5°	3945.8	3942.4	3960.9	3976.0	4095.6	4171.1	4297.7	4451.0	4560.1	4627.5	4563.6
60°	4620.5	4617.0	4647.2	4735.5	4824.9	4935.2	5058.3	5241.8	5395.1	5414.8	5352.1
62.5°	5109.4	5126.8	5193.0	5296.4	5477.5	5693.5	5918.8	6160.3	6475.0	6574.9	6544.7
65°	4938.7	4973.5	5065.3	5222.0	5463.6	5762.0	6115.0	6552.8	6974.3	7210.1	7203.1
66°	4785.4	4823.7	4936.4	5087.3	5342.8	5669.1	6054.6	6531.9	7003.4	7263.5	7279.7
67.5°	4506.7	4549.7	4660.0	4838.8	5087.3	5434.5	5849.1	6368.2	6901.2	7204.2	7247.2
70°	3964.4	4013.2	4093.3	4240.8	4485.8	4795.9	5232.5	5697.0	6255.5	6602.7	6655.0
72.5°	3314.1	3357.1	3446.5	3567.3	3768.2	3963.3	4305.8	4648.4	5047.8	5443.8	5405.5
75°	2379.4	2397.9	2451.3	2582.6	2690.6	2865.9	3141.1	3422.1	3695.0	3876.2	3901.7
77.5°	1236.7	1285.5	1361.0	1506.1	1623.4	1781.3	1960.1	2171.5	2371.2	2537.3	2492.0
80°	809.4	830.3	897.6	971.9	1057.9	1158.9	1278.5	1357.5	1383.0	1372.6	1383.0
82.5°	466.8	505.1	594.5	651.4	715.3	750.2	845.4	935.9	987.0	923.2	900.0
85°	59.2	76.6	241.5	304.2	348.4	400.6	429.7	484.2	451.7	404.1	492.4
87.5°	12.8	11.6	16.3	34.8	36.0	30.2	56.9	60.4	37.2	18.6	23.2
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):

	50°	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°
0°	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7
2.5°	1373.7	1374.9	1377.2	1380.7	1383.0	1385.3	1387.7	1391.1	1393.5	1395.8	1400.4
5°	1367.9	1372.6	1377.2	1381.9	1387.7	1397.0	1402.8	1407.4	1412.1	1421.3	1424.8
7.5°	1364.4	1372.6	1379.5	1387.7	1397.0	1405.1	1415.5	1421.3	1428.3	1434.1	1441.1
10°	1362.1	1373.7	1380.7	1392.3	1402.8	1410.9	1422.5	1429.5	1437.6	1444.6	1448.0
12.5°	1366.8	1372.6	1379.5	1391.1	1403.9	1415.5	1428.3	1434.1	1441.1	1446.9	1448.0
15°	1386.5	1386.5	1387.7	1397.0	1409.7	1419.0	1429.5	1435.3	1438.8	1442.2	1442.2
17.5°	1422.5	1414.4	1408.6	1409.7	1417.9	1423.7	1429.5	1429.5	1427.1	1426.0	1423.7
20°	1464.3	1453.9	1442.2	1434.1	1431.8	1427.1	1423.7	1412.1	1402.8	1394.6	1388.8
22.5°	1524.7	1508.4	1492.2	1477.1	1463.1	1445.7	1426.0	1402.8	1380.7	1365.6	1356.3
25°	1599.0	1586.2	1566.5	1543.3	1525.9	1493.3	1467.8	1434.1	1406.2	1386.5	1370.2
27.5°	1704.7	1689.6	1671.0	1650.1	1624.6	1588.6	1557.2	1517.7	1484.0	1455.0	1434.1
30°	1835.9	1816.2	1802.2	1776.7	1759.3	1718.6	1687.3	1638.5	1573.5	1527.0	1498.0
32.5°	1970.6	1948.5	1936.9	1917.2	1897.4	1873.1	1825.4	1750.0	1666.4	1590.9	1540.9
35°	2150.6	2127.4	2106.5	2089.0	2060.0	2014.7	1972.9	1882.3	1767.4	1661.7	1578.1
37.5°	2377.0	2338.7	2286.5	2242.3	2191.2	2126.2	2062.3	1969.4	1838.2	1701.2	1589.7
40°	2618.6	2551.2	2476.9	2394.4	2306.2	2212.1	2139.0	2044.9	1897.4	1734.9	1581.6
42.5°	2870.6	2763.7	2660.4	2544.2	2421.2	2309.7	2214.5	2111.1	1941.6	1744.2	1549.1
45°	3120.2	3000.6	2843.8	2691.7	2536.1	2397.9	2291.1	2175.0	1982.2	1747.6	1506.1
47.5°	3326.9	3203.8	3025.0	2834.6	2649.9	2493.2	2367.7	2242.3	2036.8	1772.0	1495.7
50°	3545.2	3395.4	3196.9	2971.6	2762.6	2587.2	2453.7	2323.6	2113.4	1834.7	1529.3
52.5°	3783.3	3611.4	3379.2	3127.2	2898.4	2702.2	2557.0	2423.5	2211.0	1923.0	1593.2
55°	4073.6	3863.4	3611.4	3326.9	3081.9	2864.7	2704.5	2546.6	2327.1	2027.5	1673.3
57.5°	4517.2	4259.4	3976.0	3652.1	3380.3	3123.7	2932.1	2749.8	2507.1	2183.1	1782.5
60°	5319.6	5044.4	4676.3	4283.8	3964.4	3664.8	3383.8	3157.4	2858.9	2489.7	2024.0
62.5°	6469.2	6103.4	5612.2	5062.9	4644.9	4212.9	3895.9	3559.2	3188.7	2790.4	2308.5
65°	7107.9	6664.3	6007.0	5369.5	4831.9	4362.7	3959.8	3569.6	3158.5	2777.7	2374.7
66°	7186.8	6724.7	6041.9	5370.7	4806.3	4324.4	3900.6	3496.5	3076.1	2712.6	2346.8
67.5°	7154.3	6681.7	5978.0	5269.6	4696.0	4178.1	3740.3	3321.1	2901.9	2562.8	2253.9
70°	6621.3	6173.1	5482.1	4795.9	4251.2	3740.3	3322.3	2910.0	2525.7	2235.4	2007.8
72.5°	5498.4	5115.2	4514.8	3976.0	3548.7	3127.2	2773.0	2379.4	2054.2	1839.4	1704.7
75°	3969.1	3736.8	3189.9	2881.0	2505.9	2226.1	1882.3	1648.9	1415.5	1311.0	1287.8
77.5°	2507.1	2194.7	1847.5	1521.2	1250.6	1037.0	807.1	685.1	571.3	559.7	675.8
80°	1269.2	1142.6	880.2	701.4	589.9	477.3	377.4	285.7	199.7	240.4	288.0
82.5°	831.4	693.3	543.5	447.1	389.0	322.8	250.8	174.2	127.7	144.0	197.4
85°	449.4	383.2	308.9	243.9	197.4	176.5	118.4	83.6	82.4	88.3	112.6
87.5°	32.5	32.5	25.5	23.2	27.9	23.2	20.9	20.9	19.7	20.9	27.9
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°	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7	1387.7
2.5°	1402.8	1406.2	1407.4	1413.2	1416.7	1419.0	1421.3	1421.3	1422.5	1426.0	1427.1
5°	1429.5	1435.3	1442.2	1446.9	1449.2	1456.2	1458.5	1458.5	1460.8	1465.5	1469.0
7.5°	1445.7	1453.9	1460.8	1463.1	1467.8	1470.1	1473.6	1475.9	1475.9	1480.6	1482.9
10°	1451.5	1456.2	1463.1	1463.1	1467.8	1467.8	1471.3	1472.4	1472.4	1477.1	1480.6
12.5°	1451.5	1453.9	1459.7	1459.7	1463.1	1464.3	1469.0	1472.4	1473.6	1479.4	1484.0
15°	1444.6	1446.9	1451.5	1452.7	1460.8	1465.5	1475.9	1482.9	1482.9	1488.7	1491.0
17.5°	1424.8	1430.6	1439.9	1449.2	1464.3	1474.8	1487.5	1493.3	1488.7	1485.2	1481.7
20°	1392.3	1402.8	1424.8	1448.0	1474.8	1488.7	1495.7	1489.9	1473.6	1457.3	1446.9
22.5°	1359.8	1380.7	1417.9	1452.7	1482.9	1492.2	1488.7	1467.8	1441.1	1421.3	1407.4
25°	1374.9	1399.3	1435.3	1466.6	1486.4	1484.0	1470.1	1441.1	1412.1	1386.5	1363.3
27.5°	1437.6	1464.3	1484.0	1494.5	1492.2	1475.9	1453.9	1421.3	1386.5	1352.8	1320.3
30°	1496.8	1510.8	1515.4	1507.3	1488.7	1462.0	1434.1	1397.0	1350.5	1308.7	1271.5
32.5°	1523.5	1509.6	1487.5	1465.5	1435.3	1412.1	1373.7	1333.1	1275.0	1225.1	1187.9
35°	1523.5	1467.8	1412.1	1365.6	1320.3	1291.3	1247.2	1192.6	1139.2	1097.4	1068.3
37.5°	1489.9	1383.0	1291.3	1215.8	1158.9	1127.6	1061.4	1012.6	967.3	953.4	934.8
40°	1428.3	1270.4	1138.0	1039.3	967.3	920.9	854.7	821.0	803.6	796.6	793.1
42.5°	1345.9	1145.0	968.5	846.5	768.7	716.5	672.3	651.4	650.3	649.1	649.1
45°	1257.6	1010.3	803.6	658.4	589.9	543.5	522.6	514.4	521.4	520.2	521.4
47.5°	1203.0	908.1	652.6	498.2	445.9	415.7	405.3	408.8	414.6	412.2	412.2
50°	1196.1	855.8	551.6	387.8	348.4	333.3	330.9	330.9	334.4	332.1	330.9
52.5°	1221.6	847.7	499.3	333.3	301.9	289.1	286.8	285.7	284.5	277.5	271.7
55°	1265.7	866.3	484.2	319.3	286.8	272.9	269.4	267.1	262.4	253.1	242.7
57.5°	1354.0	924.3	498.2	326.3	291.5	279.9	276.4	276.4	267.1	252.0	236.9
60°	1566.5	1071.8	555.1	353.0	313.5	301.9	304.2	303.1	289.1	267.1	243.9
62.5°	1840.5	1264.6	629.4	390.2	341.4	339.1	350.7	348.4	325.1	291.5	257.8
65°	1967.1	1355.2	650.3	398.3	347.2	357.7	380.9	378.6	349.5	303.1	260.1
66°	1969.4	1355.2	641.0	391.3	339.1	351.9	375.1	373.9	344.9	298.4	255.5
67.5°	1921.8	1318.0	614.3	377.4	322.8	332.1	353.0	351.9	325.1	286.8	246.2
70°	1743.0	1179.8	545.8	353.0	300.8	296.1	303.1	298.4	281.0	254.3	226.4
72.5°	1493.3	990.5	476.1	334.4	285.7	267.1	262.4	259.0	245.0	229.9	212.5
75°	1176.3	783.8	418.0	320.5	271.7	247.3	239.2	234.6	225.3	214.8	200.9
77.5°	725.8	560.9	364.6	301.9	261.3	236.9	231.1	224.1	210.2	197.4	187.0
80°	324.0	347.2	299.6	263.6	233.4	211.3	202.1	191.6	177.7	169.5	163.7
82.5°	216.0	224.1	217.1	197.4	176.5	159.1	145.2	145.2	142.8	135.9	133.5
85°	138.2	139.3	134.7	121.9	113.8	103.3	97.5	98.7	103.3	102.2	101.0
87.5°	31.4	31.4	37.2	34.8	40.6	43.0	46.4	49.9	56.9	56.9	60.4
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: P156653

CATALOG NUMBER: TLM-F05-LED-E1-T4-8030

CANDELA DISTRIBUTION (continued):

	160°	165°	170°	175°	180°
0°	1387.7	1387.7	1387.7	1387.7	1387.7
2.5°	1428.3	1430.6	1433.0	1429.5	1430.6
5°	1469.0	1467.8	1473.6	1470.1	1472.4
7.5°	1481.7	1482.9	1487.5	1487.5	1488.7
10°	1482.9	1485.2	1491.0	1494.5	1496.8
12.5°	1488.7	1493.3	1502.6	1504.9	1504.9
15°	1493.3	1495.7	1501.5	1503.8	1506.1
17.5°	1477.1	1472.4	1474.8	1475.9	1474.8
20°	1436.4	1431.8	1430.6	1426.0	1428.3
22.5°	1392.3	1379.5	1371.4	1362.1	1362.1
25°	1338.9	1319.2	1302.9	1286.6	1290.1
27.5°	1289.0	1263.4	1247.2	1236.7	1234.4
30°	1240.2	1213.5	1198.4	1185.6	1185.6
32.5°	1158.9	1140.3	1120.6	1112.5	1111.3
35°	1046.3	1034.7	1018.4	1014.9	1009.1
37.5°	919.7	916.2	902.3	901.1	895.3
40°	787.3	789.6	785.0	782.7	779.2
42.5°	654.9	666.5	664.2	663.1	660.7
45°	528.4	536.5	537.6	541.1	546.9
47.5°	415.7	418.0	420.4	419.2	420.4
50°	325.1	319.3	318.2	314.7	318.2
52.5°	262.4	253.1	248.5	243.9	241.5
55°	231.1	221.8	217.1	214.8	212.5
57.5°	223.0	213.7	206.7	202.1	200.9
60°	225.3	211.3	202.1	196.2	195.1
62.5°	231.1	212.5	199.7	193.9	192.8
65°	229.9	210.2	198.6	191.6	190.4
66°	226.4	207.9	196.2	190.4	189.3
67.5°	220.6	204.4	193.9	189.3	187.0
70°	210.2	199.7	191.6	185.8	183.5
72.5°	200.9	192.8	185.8	180.0	178.8
75°	190.4	183.5	176.5	171.9	170.7
77.5°	177.7	170.7	166.1	162.6	161.4
80°	156.8	152.1	147.5	142.8	142.8
82.5°	130.1	126.6	121.9	118.4	117.3
85°	99.9	99.9	96.4	92.9	91.7
87.5°	59.2	58.1	58.1	54.6	54.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)