

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: P150651

Luminaire Tested: **TLM-E02-LED-E1-SL3-HSS-7050**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P150651
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (P33727)
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TLM-E02-LED-E1-SL3-HSS-7050
Description: TALON MEDIUM LED SITE LUMINAIRE
(2) LIGHTBARS WITH AccuLED OPTICS - TYPE 3 W/ SPILL LIGHT CONTROL AND
HOUSE SIDE SHIELD
Light Source: (42) 5000K CCT, 70 CRI LEDs
Ballast/Driver: -

Summary

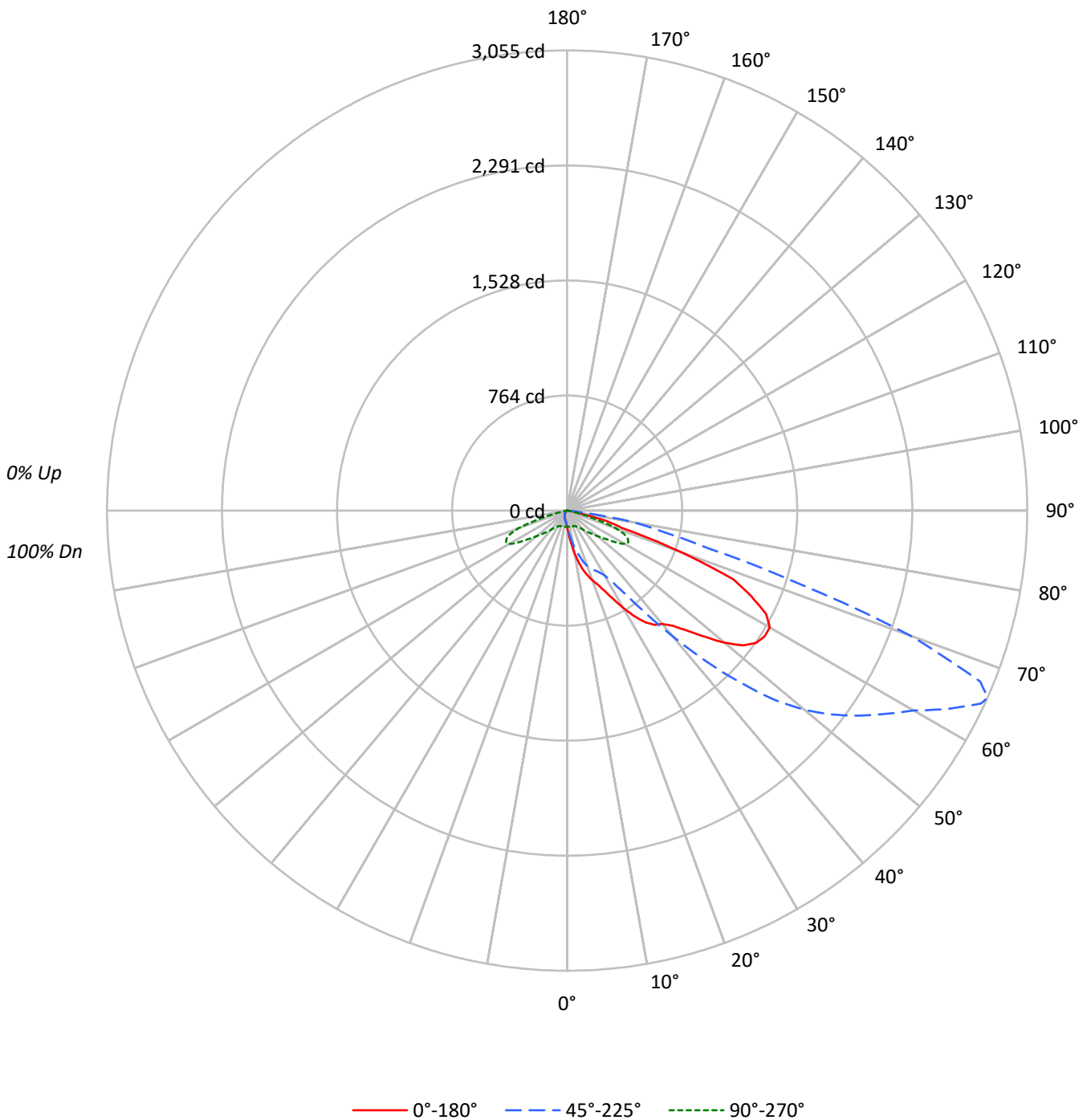
Lumens per Lamp: N/A
Luminaire Lumens: 3558.2 lumens
Efficiency: N/A
Efficacy: 68.3 lumens/watt
Spacing Criteria (0/90/45): 4.23 / 3.52 / 4.34
Luminous Opening: Rectangular (W 0.33' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 52.1
Input Voltage (V): NR
Input Current (A_{in}): 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	98	93	87	102	96	91	86	92	87	83	88	84	81	84	81	78	76					76			
2	91	80	71	63	88	78	69	62	74	67	61	71	64	59	67	62	58	55					55			
3	80	66	55	46	77	64	54	46	61	52	45	58	50	44	55	48	43	40					40			
4	71	55	43	35	68	53	43	34	51	41	34	48	40	33	45	38	32	30					30			
5	63	47	35	27	61	45	34	26	43	33	26	41	32	26	39	31	25	23					23			
6	57	40	29	21	55	39	29	21	37	28	21	35	27	20	33	26	20	17					17			
7	52	35	24	17	50	34	24	17	33	23	17	31	23	16	29	22	16	14					14			
8	48	31	21	14	46	30	21	14	29	20	14	28	19	13	26	19	13	11					11			
9	44	28	18	12	42	27	18	12	26	17	11	25	17	11	24	16	11	9					9			
10	41	25	16	10	39	25	16	10	24	15	10	23	15	10	22	15	10	7					7			

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3503	3503	3503
5°	5867	3528	2577
10°	9628	3557	2153
15°	13744	3708	1824
20°	17095	3836	1565
25°	21148	4061	1328
30°	28109	4548	1134
35°	36064	5380	952
40°	41826	7079	758
45°	51941	9560	567
50°	69185	13331	553
55°	87138	19489	620
60°	101344	28916	672
65°	104171	34345	741
70°	76133	32978	849
75°	34317	14354	1122
80°	6161	3597	1672
85°	524	3200	3069



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	12.0	0.3
10°-20°	51.0	1.4
20°-30°	109.9	3.1
30°-40°	234.8	6.6
40°-50°	519.3	14.6
50°-60°	880.0	24.7
60°-70°	1174.3	33.0
70°-80°	517.3	14.5
80°-90°	59.6	1.7
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°	172.9	4.9
0°-40°	407.8	11.5
0°-60°	1807.0	50.8
0°-90°	3558.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3558.2	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	107	107	107	107	107	
5°	179	152	108	81	79	20
15°	407	311	110	58	54	116
25°	588	438	113	42	37	281
35°	906	679	135	29	24	562
45°	1126	1597	207	17	12	890
55°	1532	2374	343	8	11	1350
65°	1350	3030	445	6	10	1289
75°	272	970	114	5	9	300
85°	1	20	9	4	8	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	67°	68°
0°	107.4	107.4	107.4	107.4	107.4	107.4	107.4	107.4	107.4	107.4	107.4
2.5°	135.4	134.8	132.0	132.0	127.9	125.2	121.8	118.3	118.3	117.7	117.0
5°	179.2	175.1	174.4	166.9	160.8	151.9	143.7	132.7	131.3	130.0	129.3
7.5°	227.8	227.1	221.0	212.1	199.7	183.3	166.9	149.1	146.4	145.0	142.3
10°	290.7	287.3	279.1	264.1	245.6	223.7	197.0	169.0	165.5	162.8	161.4
12.5°	350.9	344.8	340.0	320.8	297.6	265.4	233.3	192.9	190.2	186.8	181.3
15°	407.0	401.5	393.3	376.9	350.9	310.6	272.9	223.7	216.9	212.1	208.0
17.5°	450.8	447.4	437.8	419.3	391.3	355.7	310.6	255.2	249.7	243.5	236.0
20°	492.5	487.7	472.7	447.4	417.3	389.9	355.0	296.2	288.7	281.2	272.9
22.5°	532.2	527.4	502.8	461.1	428.9	417.3	405.0	342.7	331.1	324.9	316.7
25°	587.6	577.4	539.0	472.7	429.6	438.5	459.7	402.9	392.0	383.1	370.1
27.5°	662.2	648.5	588.3	489.8	432.3	461.7	522.6	476.1	464.5	454.2	439.9
30°	746.3	737.4	665.6	530.8	452.2	496.0	593.1	569.1	555.5	543.2	526.1
32.5°	831.1	818.8	747.7	608.8	505.5	562.3	681.3	677.2	659.4	647.8	629.3
35°	905.7	899.6	846.9	736.7	627.3	678.6	799.0	803.8	788.0	775.7	755.2
37.5°	956.3	956.3	946.1	874.2	820.9	859.2	972.1	972.7	957.0	929.0	918.7
40°	982.3	989.8	1026.8	1040.5	1037.7	1087.0	1199.2	1186.9	1173.9	1159.5	1125.3
42.5°	1035.7	1042.5	1121.2	1215.6	1277.2	1342.1	1419.4	1415.3	1399.6	1373.6	1342.1
45°	1126.0	1134.9	1228.6	1378.4	1505.0	1597.3	1646.6	1627.4	1611.7	1587.0	1570.6
47.5°	1240.9	1258.0	1364.0	1549.4	1702.0	1854.5	1905.8	1855.2	1841.5	1822.4	1795.7
50°	1363.4	1379.8	1492.6	1704.7	1877.1	2059.1	2144.6	2059.1	2039.2	2033.1	2003.0
52.5°	1469.4	1483.1	1591.8	1824.4	2011.2	2224.6	2349.1	2236.2	2221.9	2201.3	2179.4
55°	1532.3	1543.3	1645.2	1881.9	2102.1	2373.7	2546.8	2447.6	2426.4	2418.2	2386.7
57.5°	1553.5	1564.5	1656.1	1889.4	2151.4	2509.9	2786.9	2790.3	2765.0	2735.6	2726.0
60°	1553.5	1565.8	1643.1	1870.9	2199.3	2654.9	3107.0	3392.3	3337.6	3332.1	3297.2
62.5°	1489.2	1500.9	1578.8	1814.2	2263.6	2850.5	3553.1	4056.5	4040.8	4005.2	3947.8
65°	1349.7	1356.5	1433.1	1669.1	2239.0	3030.4	3939.6	4498.4	4473.1	4403.4	4329.5
66°	1286.7	1292.2	1364.0	1586.4	2158.2	3055.1	4008.0	4553.9	4512.1	4453.3	4369.8
67.5°	1195.8	1205.3	1256.0	1432.4	1964.6	2969.5	3964.9	4514.9	4478.6	4407.5	4324.0
70°	798.3	791.5	970.0	1099.3	1496.7	2419.6	3557.2	4053.8	4054.5	4021.0	3987.4
72.5°	379.0	383.1	435.1	676.5	979.6	1616.5	2831.4	3235.7	3282.2	3222.0	3180.2
75°	272.3	278.4	309.9	413.9	584.2	970.0	1835.4	2262.9	2264.3	2157.6	2062.5
77.5°	79.4	82.8	116.3	255.2	437.8	654.7	1054.2	1258.0	1228.6	1152.0	1080.1
80°	32.8	32.8	34.2	81.4	175.8	444.6	737.4	968.6	965.2	935.8	893.4
82.5°	12.3	13.0	16.4	33.5	41.7	109.5	491.8	840.7	838.7	796.9	766.8
85°	1.4	1.4	4.1	14.4	15.7	20.5	98.5	370.8	368.7	370.8	324.9
87.5°	0.0	0.0	0.7	1.4	2.1	2.7	4.1	14.4	15.7	15.0	13.7
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):

	69°	70°	71°	72°	73°	74°	75°	76°	77°	78°	79°
0°	107.4	107.4	107.4	107.4	107.4	107.4	107.4	107.4	107.4	107.4	107.4
2.5°	117.0	115.6	115.6	114.9	114.9	114.9	114.2	113.6	113.6	112.9	112.2
5°	127.9	126.6	125.9	124.5	123.8	123.1	121.8	121.1	119.7	119.0	118.3
7.5°	140.9	138.2	137.5	135.4	133.4	132.0	130.7	128.6	127.2	124.5	123.8
10°	157.3	153.9	151.2	148.4	146.4	143.0	140.9	138.2	135.4	133.4	131.3
12.5°	178.5	173.8	169.6	166.9	162.1	158.0	153.9	151.9	146.4	143.7	140.2
15°	201.8	196.3	191.5	186.1	182.6	175.8	170.3	164.2	161.4	156.7	151.2
17.5°	231.9	223.0	215.5	210.0	203.2	196.3	190.2	184.0	175.8	170.3	163.5
20°	264.1	256.5	246.3	236.7	228.5	220.3	211.4	203.2	195.6	186.8	178.5
22.5°	305.1	294.2	281.8	272.3	261.3	252.4	240.1	229.2	216.9	205.2	195.6
25°	357.1	342.7	331.1	317.4	304.4	290.7	275.7	262.0	246.3	235.3	218.9
27.5°	421.4	407.7	392.0	374.2	361.2	340.7	320.8	303.7	285.3	268.2	249.7
30°	503.5	483.6	467.2	450.1	424.1	404.3	381.0	357.8	332.5	315.4	287.3
32.5°	602.0	580.8	556.1	531.5	507.6	479.5	450.8	422.1	394.0	362.6	333.8
35°	722.4	697.1	669.0	642.3	605.4	575.3	539.0	499.4	467.9	431.6	395.4
37.5°	881.8	840.0	815.4	787.4	737.4	696.4	656.0	616.3	560.9	522.6	471.3
40°	1081.5	1056.9	1016.5	971.4	926.2	872.2	817.5	764.8	700.5	647.1	587.6
42.5°	1316.2	1279.9	1238.9	1173.9	1128.0	1064.4	1002.2	932.4	853.7	785.3	715.5
45°	1536.4	1493.3	1461.9	1396.9	1349.0	1273.7	1198.5	1124.6	1033.6	945.4	864.7
47.5°	1774.5	1738.9	1686.9	1634.2	1585.7	1500.9	1419.4	1329.8	1234.1	1129.4	1024.7
50°	1983.8	1955.8	1920.2	1856.6	1802.5	1731.4	1635.6	1537.8	1416.7	1312.7	1193.7
52.5°	2161.7	2139.8	2089.8	2044.7	1996.1	1929.1	1843.6	1749.9	1619.2	1505.0	1369.5
55°	2371.7	2355.9	2312.2	2284.1	2241.0	2176.7	2096.7	2009.8	1871.6	1747.1	1593.9
57.5°	2715.8	2703.4	2665.1	2653.5	2611.1	2555.0	2456.5	2363.5	2202.0	2047.4	1872.3
60°	3285.6	3261.0	3204.9	3176.1	3086.5	3011.3	2883.4	2755.4	2560.5	2363.5	2152.8
62.5°	3895.8	3826.7	3720.0	3628.3	3501.1	3370.4	3199.4	3003.8	2775.3	2541.3	2299.2
65°	4224.8	4107.2	3972.4	3826.7	3661.8	3469.6	3254.1	3019.5	2773.9	2527.0	2271.1
66°	4262.4	4129.7	3986.8	3824.6	3641.3	3436.8	3217.9	2971.6	2716.4	2475.7	2219.8
67.5°	4215.2	4076.4	3925.2	3745.3	3546.9	3334.8	3105.0	2849.2	2603.6	2359.4	2110.4
70°	3884.8	3746.7	3611.9	3422.4	3211.0	2997.6	2780.1	2494.1	2261.5	2037.2	1815.5
72.5°	3102.3	3008.5	2875.1	2713.0	2507.1	2256.7	2075.5	1819.6	1617.8	1400.3	1228.6
75°	1938.7	1806.6	1641.8	1435.2	1277.8	1074.7	968.6	774.4	659.4	558.9	461.7
77.5°	991.2	892.0	776.4	660.1	548.6	437.8	338.6	239.4	161.4	112.2	83.5
80°	818.8	731.3	635.5	529.5	431.0	334.5	240.8	164.2	104.7	68.4	53.4
82.5°	676.5	602.7	517.2	418.7	333.1	262.7	182.6	119.0	73.9	47.9	37.6
85°	288.0	261.3	201.8	160.1	120.4	88.9	62.3	41.7	29.4	23.9	21.9
87.5°	12.3	13.7	13.0	10.3	7.5	7.5	6.8	5.5	5.5	5.5	5.5
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):

	80°	81°	82°	83°	84°	85°	95°	105°	115°	125°	135°
0°	107.4	107.4	107.4	107.4	107.4	107.4	107.4	107.4	107.4	107.4	107.4
2.5°	112.2	111.5	110.8	110.8	110.1	109.5	105.3	101.9	97.8	95.1	92.3
5°	117.0	116.3	114.9	114.2	112.9	112.2	103.3	95.8	89.6	84.8	81.4
7.5°	121.8	121.1	119.0	117.0	116.3	114.9	100.6	91.0	82.8	77.3	73.9
10°	127.9	125.9	123.8	121.1	119.0	117.0	97.8	85.5	76.6	71.8	68.4
12.5°	136.8	133.4	130.0	126.6	123.8	120.4	96.5	80.7	71.8	66.4	62.9
15°	147.1	142.3	138.2	134.1	129.3	125.9	93.7	76.6	67.7	62.3	58.1
17.5°	156.7	151.2	145.0	138.9	134.1	129.3	91.0	72.5	63.6	58.1	54.0
20°	170.3	162.1	154.6	147.1	140.2	134.1	86.9	68.4	60.2	54.0	49.9
22.5°	185.4	175.8	166.2	156.0	147.1	138.9	83.5	65.0	56.8	50.6	45.8
25°	204.5	192.9	179.9	166.9	156.7	145.7	80.0	61.6	53.4	47.2	42.4
27.5°	231.2	214.8	200.4	184.0	168.3	156.0	77.3	58.8	49.9	43.8	39.0
30°	267.5	243.5	221.0	203.2	184.7	166.9	74.6	55.4	47.2	40.4	34.9
32.5°	307.8	279.8	253.8	227.1	203.9	183.3	71.8	52.7	43.8	36.9	32.2
35°	357.8	322.2	287.3	256.5	228.5	201.1	69.1	49.9	41.0	33.5	28.7
37.5°	429.6	385.1	339.3	299.6	263.4	227.1	67.0	47.2	37.6	30.1	25.3
40°	528.1	470.6	414.5	360.5	313.3	268.2	64.3	44.5	34.9	27.4	22.6
42.5°	634.8	565.0	491.2	430.3	365.3	308.5	61.6	41.7	32.2	24.6	19.8
45°	767.5	680.6	591.0	508.3	428.9	355.7	58.8	39.0	28.7	21.9	17.1
47.5°	912.5	801.7	700.5	596.5	502.1	414.5	55.4	36.9	26.0	19.2	15.0
50°	1061.7	944.7	816.8	698.4	586.2	473.4	52.0	33.5	23.3	17.1	12.3
52.5°	1222.4	1084.3	953.6	806.5	675.9	550.7	48.6	30.8	21.2	15.0	10.3
55°	1427.0	1272.4	1119.1	954.3	796.9	640.3	45.1	27.4	18.5	13.0	8.2
57.5°	1684.2	1500.9	1312.7	1126.7	935.8	757.9	42.4	23.9	15.7	10.9	6.8
60°	1927.0	1712.9	1485.1	1271.0	1055.5	848.2	38.3	21.2	13.7	8.9	6.8
62.5°	2052.9	1808.7	1563.1	1327.1	1097.2	880.4	34.2	17.8	11.6	7.5	6.2
65°	2022.1	1773.1	1535.1	1297.0	1071.9	859.9	30.1	15.7	10.3	6.8	6.2
66°	1977.6	1731.4	1492.0	1265.5	1050.7	838.0	28.0	15.0	9.6	6.8	5.5
67.5°	1880.5	1642.5	1414.0	1203.3	992.6	796.3	25.3	13.7	8.9	6.2	5.5
70°	1606.2	1390.0	1207.4	1019.9	848.2	671.1	20.5	11.6	7.5	5.5	5.5
72.5°	1063.0	916.0	794.2	683.4	571.2	443.3	17.1	9.6	6.2	5.5	4.8
75°	400.9	362.6	311.3	279.8	244.2	214.1	13.7	6.2	4.8	4.8	4.8
77.5°	71.1	65.7	58.1	53.4	49.3	45.1	10.9	4.1	4.1	4.8	4.8
80°	47.9	44.5	40.4	36.9	34.2	30.8	7.5	3.4	4.1	4.1	4.8
82.5°	34.2	32.2	30.1	27.4	25.3	22.6	4.8	3.4	4.1	4.1	4.1
85°	20.5	19.2	17.8	16.4	14.4	13.7	3.4	3.4	3.4	4.1	4.1
87.5°	5.5	4.8	5.5	5.5	4.1	4.8	2.7	2.7	2.7	3.4	3.4
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: P150651

CATALOG NUMBER: TLM-E02-LED-E1-SL3-HSS-7050

CANDELA DISTRIBUTION (continued):

	145°	155°	165°	175°	180°
0°	107.4	107.4	107.4	107.4	107.4
2.5°	91.0	91.0	89.6	91.7	91.7
5°	78.7	78.7	78.0	78.7	78.7
7.5°	71.8	71.1	71.1	71.1	71.8
10°	65.7	65.0	65.0	65.0	65.0
12.5°	60.2	59.5	58.8	59.5	59.5
15°	55.4	54.0	54.0	54.0	54.0
17.5°	51.3	49.9	49.3	49.3	49.3
20°	47.2	45.1	45.1	45.1	45.1
22.5°	43.1	41.0	41.0	41.0	41.0
25°	39.0	36.9	36.9	36.9	36.9
27.5°	35.6	33.5	33.5	33.5	33.5
30°	31.5	30.1	30.1	30.8	30.1
32.5°	28.7	26.7	26.7	27.4	27.4
35°	25.3	23.9	23.9	23.9	23.9
37.5°	21.9	20.5	20.5	20.5	20.5
40°	19.2	17.8	17.1	17.8	17.8
42.5°	16.4	15.0	14.4	14.4	14.4
45°	14.4	12.3	11.6	12.3	12.3
47.5°	11.6	10.3	10.3	10.9	10.9
50°	8.9	8.9	9.6	10.9	10.9
52.5°	8.2	8.2	9.6	10.9	10.9
55°	7.5	8.2	9.6	10.3	10.9
57.5°	6.8	8.2	9.6	10.3	10.3
60°	6.8	7.5	8.9	10.3	10.3
62.5°	6.2	6.8	8.2	9.6	9.6
65°	6.2	6.8	8.2	9.6	9.6
66°	6.2	6.8	8.2	9.6	9.6
67.5°	6.2	6.8	8.2	9.6	9.6
70°	6.2	6.8	8.2	8.9	8.9
72.5°	5.5	6.2	7.5	8.9	8.9
75°	5.5	6.2	7.5	8.9	8.9
77.5°	5.5	6.2	7.5	8.9	8.9
80°	5.5	6.2	7.5	8.2	8.9
82.5°	4.8	6.2	6.8	8.2	8.2
85°	4.8	5.5	6.8	7.5	8.2
87.5°	4.1	4.8	5.5	6.8	6.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)