

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P288461

Luminaire Tested: **4WNLED-LD4-50SL-F-UNV-L830-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P288461
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1902-121-2)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4WNLED-LD4-50SL-F-UNV-L830-CD1-U
Description: 4FT WNLED WRAPAROUND
Light Source: (112) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

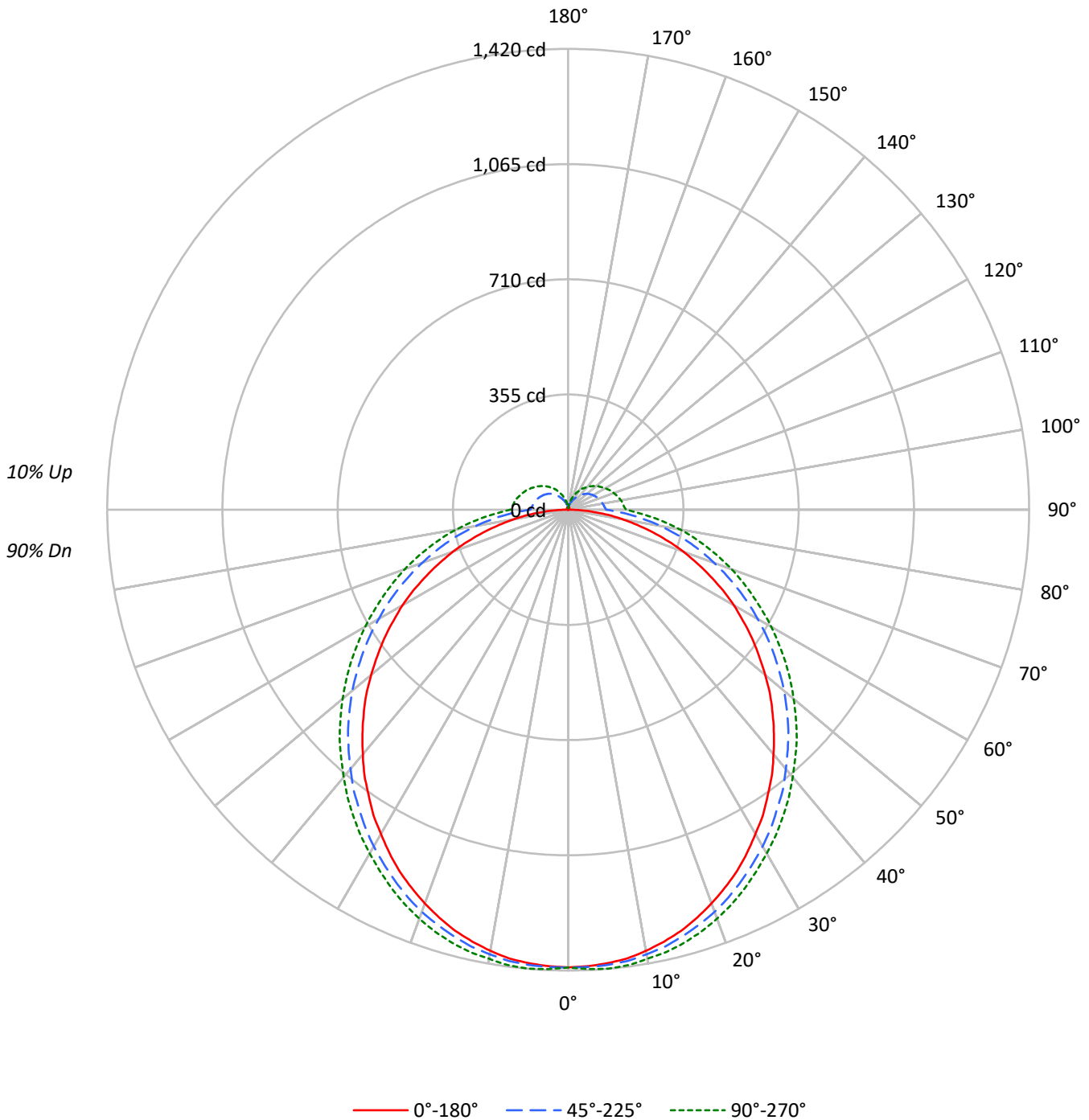
Lumens per Lamp: N/A
Luminaire Lumens: 4831.0 lumens
Efficiency: N/A
Efficacy: 113.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 42.4
Input Voltage (V): 120
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

TEST NUMBER: P288461

CATALOG NUMBER: 4WNLED-LD4-50SL-F-UNV-L830-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P288461

CATALOG NUMBER: 4WNLED-LD4-50SL-F-UNV-L830-CD1-U

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	117	117	117	117	113	113	113	113	106	106	106	99	99	99	93	93	93	90
1	105	100	95	91	101	97	92	89	91	87	84	85	82	80	80	78	76	73
2	95	86	79	73	92	84	77	71	78	73	68	74	69	65	69	66	62	60
3	86	75	67	60	83	73	65	59	69	62	57	65	59	54	61	56	52	50
4	79	67	58	51	76	65	56	50	61	54	48	57	51	46	54	49	45	42
5	73	59	50	43	70	58	49	43	54	47	41	51	45	40	49	43	39	36
6	67	53	44	38	64	52	43	37	49	42	36	46	40	35	44	38	34	32
7	62	48	39	33	60	47	39	33	45	37	32	42	36	31	40	34	30	28
8	58	44	35	29	55	43	35	29	41	33	28	39	32	28	37	31	27	25
9	54	40	32	26	52	39	31	26	37	30	25	36	29	25	34	28	24	22
10	50	37	29	24	49	36	29	24	35	28	23	33	27	22	32	26	22	20

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3796	3796	3796
5°	3778	3766	3793
10°	3751	3728	3757
15°	3712	3682	3724
20°	3656	3630	3673
25°	3598	3564	3611
30°	3520	3499	3544
35°	3446	3425	3484
40°	3368	3353	3421
45°	3288	3287	3369
50°	3199	3213	3303
55°	3106	3132	3249
60°	3008	3047	3198
65°	2873	2965	3149
70°	2729	2883	3135
75°	2517	2820	3126
80°	2263	2750	3165
85°	1790	2703	3270



TEST NUMBER: P288461

CATALOG NUMBER: 4WNLED-LD4-50SL-F-UNV-L830-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.8	2.8
10°-20°	383.5	7.9
20°-30°	579.3	12.0
30°-40°	698.3	14.5
40°-50°	732.2	15.2
50°-60°	682.5	14.1
60°-70°	561.7	11.6
70°-80°	392.5	8.1
80°-90°	204.1	4.2
90°-100°	110.9	2.3
100°-110°	99.8	2.1
110°-120°	84.9	1.8
120°-130°	67.3	1.4
130°-140°	48.3	1.0
140°-150°	30.0	0.6
150°-160°	15.3	0.3
160°-170°	5.5	0.1
170°-180°	0.9	0.0
0°-30°	1096.6	22.7
0°-40°	1794.9	37.2
0°-60°	3209.6	66.4
0°-90°	4367.9	90.4
90°-120°	295.6	6.1
90°-150°	441.3	9.1
90°-180°	463.0	9.6
0°-180°	4831.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1410	1410	1410	1410	1410	
5°	1403	1391	1408	1405	1420	133
15°	1344	1336	1361	1364	1382	379
25°	1229	1229	1262	1269	1287	566
35°	1072	1082	1123	1138	1153	671
45°	891	913	959	980	996	687
55°	692	722	773	802	816	618
65°	482	520	576	614	627	478
75°	270	322	383	425	441	287
85°	79	134	198	241	257	84
90°	1	54	117	163	178	5
95°	1	51	112	156	171	1
105°	1	47	104	144	157	2
115°	3	45	94	130	142	3
125°	4	39	83	114	122	3
135°	4	32	68	96	102	3
145°	5	24	50	74	80	3
155°	7	17	33	48	55	3
165°	7	12	18	25	30	2
175°	7	8	9	8	9	1
180°	7	7	7	7	7	



TEST NUMBER: P288461

CATALOG NUMBER: 4WNLED-LD4-50SL-F-UNV-L830-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1410.5	1410.5	1410.5	1410.5	1410.5	1410.5	1410.5	1410.5	1410.5	1410.5	1410.5
2.5°	1407.8	1414.4	1406.5	1409.2	1401.3	1396.0	1418.3	1403.9	1405.2	1418.3	1410.5
5°	1402.6	1409.2	1401.3	1403.9	1397.3	1390.8	1414.4	1401.3	1402.6	1414.4	1407.8
7.5°	1394.7	1400.0	1392.1	1394.7	1389.5	1382.9	1405.2	1394.7	1396.0	1406.5	1402.6
10°	1380.3	1385.5	1381.6	1382.9	1377.7	1371.1	1394.7	1381.6	1384.2	1396.0	1390.8
12.5°	1363.2	1369.8	1363.2	1365.9	1361.9	1355.4	1377.7	1367.2	1369.8	1381.6	1379.0
15°	1343.5	1347.5	1343.5	1346.2	1342.2	1335.7	1358.0	1350.1	1352.7	1364.5	1360.6
17.5°	1318.6	1323.9	1319.9	1323.9	1319.9	1313.4	1335.7	1327.8	1330.4	1343.5	1340.9
20°	1291.1	1297.6	1292.4	1297.6	1293.7	1288.4	1310.7	1304.2	1306.8	1319.9	1318.6
22.5°	1260.9	1267.4	1262.2	1266.1	1266.1	1260.9	1281.9	1277.9	1280.6	1292.4	1292.4
25°	1229.4	1233.3	1230.7	1234.6	1233.3	1229.4	1250.4	1247.8	1249.1	1259.6	1262.2
27.5°	1192.7	1199.2	1195.3	1200.5	1199.2	1196.6	1216.3	1213.7	1217.6	1229.4	1230.7
30°	1153.3	1159.9	1157.2	1163.8	1162.5	1159.9	1180.9	1179.5	1182.2	1192.7	1197.9
32.5°	1116.6	1119.2	1119.2	1124.4	1125.7	1123.1	1142.8	1142.8	1146.7	1155.9	1162.5
35°	1072.0	1078.5	1075.9	1086.4	1085.1	1082.4	1102.1	1103.4	1107.4	1117.9	1123.1
37.5°	1031.3	1033.9	1033.9	1043.1	1045.7	1041.8	1058.8	1064.1	1068.0	1077.2	1086.4
40°	984.0	989.3	989.3	999.8	1002.4	999.8	1018.2	1023.4	1027.3	1037.8	1043.1
42.5°	938.1	942.1	944.7	953.9	959.1	956.5	973.5	980.1	984.0	995.9	1001.1
45°	890.9	894.8	896.1	907.9	913.2	913.2	927.6	936.8	942.1	951.2	959.1
47.5°	843.7	845.0	848.9	859.4	867.3	867.3	881.7	889.6	896.1	905.3	913.2
50°	792.5	795.1	800.4	812.2	818.7	818.7	833.2	843.7	850.2	859.4	868.6
52.5°	741.3	745.3	750.5	762.3	770.2	771.5	783.3	796.4	800.4	810.9	820.0
55°	691.5	694.1	700.6	713.8	721.6	721.6	736.1	747.9	754.4	763.6	772.8
57.5°	639.0	642.9	649.5	662.6	670.5	671.8	684.9	696.7	704.6	713.8	724.3
60°	589.1	589.1	597.0	612.7	620.6	623.2	633.7	646.8	654.7	663.9	674.4
62.5°	536.6	536.6	545.8	558.9	568.1	570.7	585.2	597.0	604.9	614.0	625.9
65°	481.5	485.5	493.3	507.8	518.3	519.6	530.1	544.5	555.0	564.2	576.0
67.5°	429.0	434.3	439.5	454.0	465.8	468.4	480.2	494.6	503.8	513.0	527.4
70°	376.6	381.8	388.4	402.8	413.3	419.9	429.0	443.5	454.0	464.5	477.6
72.5°	324.1	329.3	335.9	351.6	363.4	370.0	379.2	396.2	405.4	415.9	430.4
75°	270.3	274.2	284.7	300.5	313.6	321.5	329.3	345.1	356.9	367.4	383.1
77.5°	217.8	224.4	233.5	249.3	262.4	269.0	278.2	297.8	308.3	321.5	335.9
80°	171.9	175.8	185.0	200.7	213.9	223.1	230.9	249.3	259.8	272.9	288.7
82.5°	124.6	129.9	139.1	154.8	170.6	178.4	185.0	203.4	215.2	228.3	241.4
85°	78.7	85.3	94.5	110.2	126.0	133.8	141.7	157.4	171.9	183.7	198.1
87.5°	36.7	43.3	53.8	68.2	82.7	91.8	98.4	115.5	128.6	141.7	154.8
90°	1.3	6.6	17.1	31.5	47.2	53.8	61.7	77.4	90.5	103.7	116.8
92.5°	0.0	5.2	15.7	30.2	44.6	52.5	59.0	74.8	87.9	101.0	114.1
95°	1.3	5.2	15.7	28.9	43.3	51.2	57.7	73.5	86.6	99.7	111.5
97.5°	1.3	5.2	15.7	28.9	43.3	49.9	57.7	72.2	85.3	98.4	110.2
100°	1.3	5.2	15.7	28.9	42.0	49.9	56.4	70.9	84.0	95.8	107.6
102.5°	1.3	5.2	15.7	27.6	42.0	48.5	55.1	69.5	82.7	94.5	106.3
105°	1.3	6.6	15.7	27.6	40.7	47.2	55.1	68.2	80.0	91.8	103.7
107.5°	2.6	6.6	15.7	27.6	40.7	47.2	53.8	66.9	78.7	90.5	101.0
110°	2.6	6.6	15.7	26.2	39.4	45.9	52.5	65.6	77.4	87.9	99.7



TEST NUMBER: P288461

CATALOG NUMBER: 4WNLED-LD4-50SL-F-UNV-L830-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	2.6	6.6	15.7	26.2	39.4	45.9	51.2	64.3	76.1	86.6	97.1
115°	2.6	6.6	14.4	26.2	38.0	44.6	49.9	63.0	73.5	84.0	94.5
117.5°	2.6	6.6	14.4	24.9	36.7	43.3	48.5	61.7	72.2	81.3	91.8
120°	3.9	6.6	14.4	24.9	35.4	42.0	47.2	59.0	69.5	80.0	89.2
122.5°	3.9	7.9	14.4	23.6	35.4	40.7	45.9	57.7	66.9	77.4	86.6
125°	3.9	7.9	14.4	23.6	34.1	39.4	44.6	55.1	65.6	74.8	82.7
127.5°	3.9	7.9	14.4	22.3	32.8	36.7	42.0	52.5	63.0	70.9	80.0
130°	3.9	7.9	13.1	21.0	30.2	35.4	39.4	49.9	59.0	68.2	76.1
132.5°	3.9	7.9	13.1	21.0	28.9	32.8	38.0	47.2	56.4	64.3	72.2
135°	3.9	6.6	11.8	19.7	27.6	31.5	35.4	44.6	52.5	60.4	68.2
137.5°	3.9	6.6	11.8	18.4	24.9	28.9	32.8	40.7	48.5	56.4	63.0
140°	5.2	6.6	11.8	17.1	23.6	27.6	30.2	38.0	44.6	51.2	59.0
142.5°	5.2	6.6	10.5	15.7	22.3	24.9	27.6	35.4	42.0	47.2	53.8
145°	5.2	6.6	10.5	15.7	21.0	23.6	26.2	32.8	38.0	43.3	49.9
147.5°	5.2	6.6	10.5	14.4	19.7	22.3	23.6	30.2	35.4	39.4	44.6
150°	6.6	7.9	10.5	14.4	18.4	19.7	22.3	27.6	31.5	36.7	40.7
152.5°	6.6	7.9	10.5	13.1	17.1	18.4	21.0	24.9	28.9	32.8	36.7
155°	6.6	7.9	9.2	11.8	15.7	17.1	19.7	22.3	26.2	28.9	32.8
157.5°	6.6	7.9	9.2	11.8	14.4	15.7	17.1	21.0	23.6	26.2	28.9
160°	6.6	7.9	9.2	10.5	13.1	14.4	15.7	18.4	21.0	23.6	24.9
162.5°	6.6	7.9	9.2	10.5	11.8	13.1	14.4	15.7	18.4	19.7	22.3
165°	6.6	7.9	7.9	9.2	11.8	11.8	13.1	14.4	15.7	17.1	18.4
167.5°	6.6	6.6	7.9	9.2	10.5	10.5	11.8	13.1	14.4	14.4	15.7
170°	6.6	6.6	7.9	7.9	9.2	9.2	10.5	10.5	11.8	13.1	13.1
172.5°	6.6	6.6	7.9	7.9	7.9	9.2	9.2	9.2	10.5	10.5	10.5
175°	6.6	6.6	7.9	7.9	7.9	7.9	7.9	7.9	7.9	7.9	9.2
177.5°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6
180°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6



TEST NUMBER: P288461

CATALOG NUMBER: 4WNLED-LD4-50SL-F-UNV-L830-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1410.5	1410.5	1410.5	1410.5	1410.5	1410.5	1410.5	1410.5	1410.5	1410.5
2.5°	1411.8	1414.4	1415.7	1411.8	1406.5	1410.5	1417.0	1409.2	1402.6	1417.0
5°	1409.2	1411.8	1411.8	1409.2	1405.2	1409.2	1415.7	1409.2	1402.6	1419.6
7.5°	1403.9	1405.2	1405.2	1402.6	1400.0	1405.2	1411.8	1405.2	1398.7	1415.7
10°	1394.7	1396.0	1396.0	1394.7	1390.8	1394.7	1401.3	1396.0	1389.5	1405.2
12.5°	1381.6	1382.9	1384.2	1381.6	1379.0	1385.5	1390.8	1384.2	1377.7	1396.0
15°	1364.5	1367.2	1367.2	1368.5	1364.5	1371.1	1376.4	1371.1	1364.5	1381.6
17.5°	1344.9	1347.5	1348.8	1348.8	1346.2	1351.4	1356.7	1351.4	1346.2	1363.2
20°	1321.2	1321.2	1325.2	1325.2	1323.9	1330.4	1335.7	1329.1	1323.9	1340.9
22.5°	1296.3	1296.3	1297.6	1297.6	1297.6	1304.2	1310.7	1304.2	1298.9	1316.0
25°	1264.8	1266.1	1267.4	1271.4	1268.8	1275.3	1281.9	1275.3	1268.8	1287.1
27.5°	1234.6	1234.6	1236.0	1239.9	1238.6	1245.1	1250.4	1243.8	1239.9	1255.6
30°	1201.8	1201.8	1203.2	1207.1	1207.1	1213.7	1217.6	1211.0	1208.4	1222.8
32.5°	1166.4	1166.4	1167.7	1173.0	1173.0	1178.2	1183.5	1178.2	1175.6	1190.0
35°	1127.1	1128.4	1131.0	1136.2	1137.6	1142.8	1148.1	1142.8	1138.9	1153.3
37.5°	1089.0	1089.0	1090.3	1098.2	1099.5	1106.1	1111.3	1106.1	1102.1	1116.6
40°	1048.3	1048.3	1051.0	1058.8	1061.5	1065.4	1072.0	1066.7	1062.8	1075.9
42.5°	1006.3	1007.7	1011.6	1018.2	1020.8	1026.0	1031.3	1027.3	1022.1	1035.2
45°	963.1	965.7	968.3	977.5	980.1	984.0	990.6	985.4	982.7	995.9
47.5°	919.8	919.8	923.7	934.2	936.8	939.4	946.0	943.4	939.4	951.2
50°	873.8	875.1	879.1	888.3	892.2	894.8	902.7	900.1	896.1	906.6
52.5°	826.6	827.9	834.5	843.7	847.6	851.5	858.1	856.8	851.5	862.0
55°	779.4	782.0	789.9	799.0	801.7	805.6	813.5	809.5	809.5	816.1
57.5°	730.8	734.8	742.6	751.8	754.4	758.4	766.2	763.6	762.3	768.9
60°	682.3	687.5	695.4	704.6	709.8	711.1	720.3	719.0	716.4	722.9
62.5°	635.0	640.3	648.2	658.7	661.3	665.2	674.4	671.8	670.5	674.4
65°	585.2	590.4	600.9	611.4	614.0	618.0	627.2	624.5	621.9	627.2
67.5°	536.6	544.5	552.4	562.9	566.8	569.4	579.9	578.6	576.0	581.2
70°	488.1	496.0	505.1	515.6	519.6	523.5	532.7	531.4	531.4	535.3
72.5°	440.9	448.7	459.2	469.7	475.0	476.3	484.2	484.2	485.5	488.1
75°	393.6	401.5	412.0	422.5	425.1	430.4	438.2	436.9	438.2	440.9
77.5°	346.4	355.6	366.1	376.6	380.5	381.8	391.0	391.0	392.3	396.2
80°	300.5	309.6	320.1	330.6	334.6	334.6	343.8	345.1	346.4	349.0
82.5°	253.2	262.4	272.9	283.4	288.7	291.3	299.1	299.1	300.5	303.1
85°	208.6	216.5	228.3	237.5	241.4	244.0	251.9	253.2	254.5	257.2
87.5°	165.3	175.8	185.0	195.5	199.4	202.1	208.6	209.9	212.6	213.9
90°	128.6	139.1	149.6	158.8	162.7	165.3	173.2	175.8	177.1	178.4
92.5°	126.0	136.5	145.6	154.8	158.8	161.4	167.9	170.6	173.2	173.2
95°	124.6	133.8	143.0	153.5	156.1	158.8	165.3	167.9	170.6	170.6
97.5°	122.0	131.2	141.7	150.9	153.5	157.4	162.7	165.3	167.9	167.9
100°	119.4	129.9	139.1	148.3	150.9	153.5	160.1	162.7	165.3	165.3
102.5°	116.8	127.3	136.5	144.3	148.3	150.9	156.1	158.8	161.4	161.4
105°	115.5	124.6	133.8	141.7	144.3	147.0	153.5	156.1	158.8	157.4
107.5°	112.8	120.7	129.9	139.1	141.7	144.3	149.6	152.2	154.8	153.5
110°	110.2	118.1	127.3	135.1	137.8	140.4	145.6	148.3	150.9	149.6



TEST NUMBER: P288461

CATALOG NUMBER: 4WNLED-LD4-50SL-F-UNV-L830-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	107.6	115.5	123.3	131.2	133.8	136.5	141.7	144.3	147.0	145.6
115°	103.7	111.5	120.7	127.3	129.9	132.5	137.8	140.4	141.7	141.7
117.5°	101.0	108.9	116.8	124.6	126.0	128.6	132.5	135.1	137.8	136.5
120°	98.4	105.0	112.8	119.4	122.0	124.6	128.6	131.2	132.5	132.5
122.5°	94.5	102.3	108.9	115.5	118.1	119.4	124.6	126.0	128.6	127.3
125°	91.8	98.4	105.0	111.5	114.1	115.5	119.4	122.0	123.3	122.0
127.5°	87.9	94.5	101.0	107.6	108.9	111.5	114.1	116.8	118.1	118.1
130°	84.0	90.5	97.1	103.7	105.0	106.3	110.2	111.5	112.8	112.8
132.5°	80.0	86.6	93.2	98.4	99.7	102.3	105.0	107.6	108.9	107.6
135°	76.1	81.3	87.9	93.2	95.8	97.1	99.7	101.0	103.7	102.3
137.5°	70.9	77.4	82.7	87.9	90.5	91.8	94.5	95.8	97.1	97.1
140°	66.9	72.2	78.7	84.0	85.3	86.6	89.2	90.5	91.8	91.8
142.5°	61.7	66.9	72.2	77.4	80.0	81.3	84.0	85.3	86.6	85.3
145°	56.4	60.4	66.9	72.2	73.5	74.8	78.7	80.0	80.0	80.0
147.5°	51.2	55.1	60.4	65.6	68.2	69.5	72.2	73.5	74.8	74.8
150°	45.9	49.9	55.1	59.0	61.7	63.0	66.9	66.9	68.2	68.2
152.5°	40.7	44.6	48.5	53.8	55.1	57.7	60.4	61.7	61.7	61.7
155°	36.7	39.4	43.3	47.2	48.5	49.9	53.8	55.1	56.4	55.1
157.5°	31.5	35.4	38.0	40.7	42.0	43.3	47.2	48.5	49.9	49.9
160°	27.6	30.2	32.8	35.4	35.4	38.0	40.7	42.0	43.3	42.0
162.5°	23.6	24.9	27.6	28.9	30.2	31.5	34.1	35.4	36.7	36.7
165°	21.0	21.0	22.3	23.6	24.9	26.2	27.6	28.9	30.2	30.2
167.5°	17.1	18.4	18.4	19.7	19.7	21.0	21.0	23.6	24.9	24.9
170°	14.4	14.4	14.4	15.7	15.7	15.7	15.7	17.1	19.7	19.7
172.5°	11.8	11.8	11.8	11.8	11.8	11.8	11.8	13.1	13.1	14.4
175°	9.2	9.2	9.2	9.2	7.9	9.2	7.9	7.9	9.2	9.2
177.5°	6.6	6.6	6.6	6.6	6.6	6.6	5.2	5.2	5.2	5.2
180°	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6	6.6

(END OF REPORT)