

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: P288459

Luminaire Tested: **4WNLED-LD4-40SL-F-UNV-L840-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P288459
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-LD4-40SL-F-UNV-L840-CD1-U
Description: 4FT WNLED WRAPAROUND
Light Source: (112) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

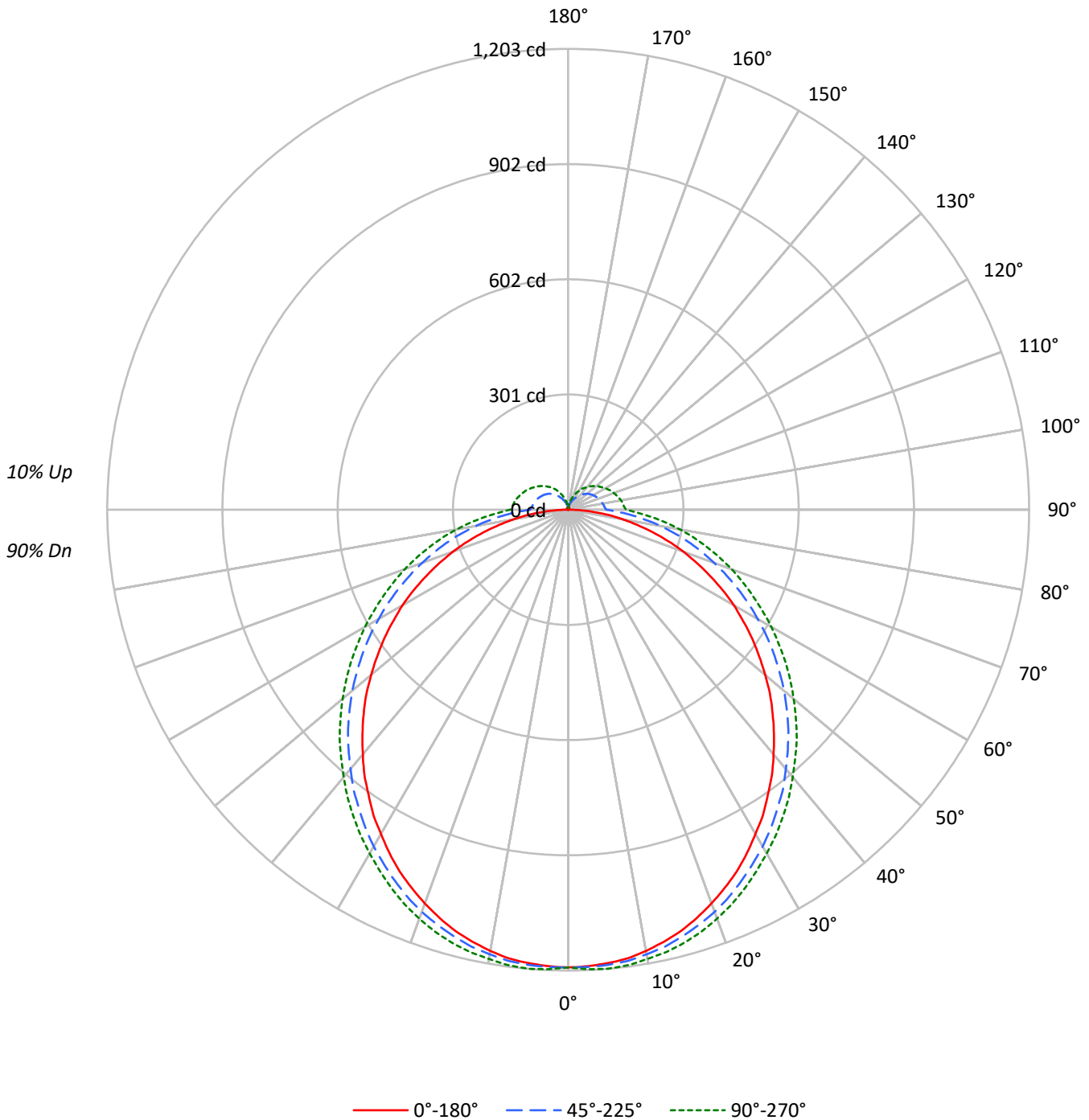
Lumens per Lamp: N/A
Luminaire Lumens: 4093.0 lumens
Efficiency: N/A
Efficacy: 127.1 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.29 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 4' x H: 0.12')
CIE Type: Direct

Input Watts (W): 32.2
Input Voltage (V): 120
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	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°	3216	3216	3216
5°	3201	3191	3214
10°	3178	3158	3183
15°	3145	3119	3155
20°	3097	3076	3112
25°	3048	3020	3060
30°	2982	2964	3002
35°	2920	2902	2952
40°	2854	2841	2898
45°	2785	2785	2854
50°	2710	2722	2799
55°	2631	2653	2752
60°	2548	2581	2710
65°	2435	2512	2668
70°	2311	2442	2656
75°	2132	2390	2648
80°	1917	2330	2681
85°	1517	2291	2770



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.4	2.8
10°-20°	324.9	7.9
20°-30°	490.8	12.0
30°-40°	591.6	14.5
40°-50°	620.4	15.2
50°-60°	578.2	14.1
60°-70°	475.9	11.6
70°-80°	332.6	8.1
80°-90°	172.9	4.2
90°-100°	94.0	2.3
100°-110°	84.6	2.1
110°-120°	71.9	1.8
120°-130°	57.0	1.4
130°-140°	40.9	1.0
140°-150°	25.5	0.6
150°-160°	13.0	0.3
160°-170°	4.7	0.1
170°-180°	0.8	0.0
0°-30°	929.1	22.7
0°-40°	1520.7	37.2
0°-60°	2719.3	66.4
0°-90°	3700.7	90.4
90°-120°	250.5	6.1
90°-150°	373.8	9.1
90°-180°	392.0	9.6
0°-180°	4093.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1195	1195	1195	1195	1195	
5°	1188	1178	1193	1191	1203	113
15°	1138	1132	1153	1156	1170	321
25°	1042	1042	1069	1075	1090	479
35°	908	917	952	964	977	569
45°	755	774	813	830	844	582
55°	586	611	655	679	691	523
65°	408	440	488	520	531	405
75°	229	272	325	360	374	243
85°	67	113	168	204	218	71
90°	1	46	99	138	151	5
95°	1	43	94	132	144	1
105°	1	40	88	122	133	2
115°	2	38	80	110	120	2
125°	3	33	70	97	103	3
135°	3	27	58	81	87	3
145°	4	20	42	62	68	3
155°	6	14	28	41	47	3
165°	6	10	16	21	26	2
175°	6	7	8	7	8	1
180°	6	6	6	6	6	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1195.0	1195.0	1195.0	1195.0	1195.0	1195.0	1195.0	1195.0	1195.0	1195.0	1195.0
2.5°	1192.8	1198.3	1191.7	1193.9	1187.2	1182.8	1201.7	1189.4	1190.6	1201.7	1195.0
5°	1188.3	1193.9	1187.2	1189.4	1183.9	1178.3	1198.3	1187.2	1188.3	1198.3	1192.8
7.5°	1181.7	1186.1	1179.4	1181.7	1177.2	1171.7	1190.6	1181.7	1182.8	1191.7	1188.3
10°	1169.4	1173.9	1170.5	1171.7	1167.2	1161.6	1181.7	1170.5	1172.8	1182.8	1178.3
12.5°	1155.0	1160.5	1155.0	1157.2	1153.9	1148.3	1167.2	1158.3	1160.5	1170.5	1168.3
15°	1138.3	1141.6	1138.3	1140.5	1137.2	1131.6	1150.5	1143.9	1146.1	1156.1	1152.8
17.5°	1117.2	1121.6	1118.3	1121.6	1118.3	1112.7	1131.6	1125.0	1127.2	1138.3	1136.1
20°	1093.8	1099.4	1095.0	1099.4	1096.1	1091.6	1110.5	1105.0	1107.2	1118.3	1117.2
22.5°	1068.3	1073.8	1069.4	1072.7	1072.7	1068.3	1086.1	1082.7	1084.9	1095.0	1095.0
25°	1041.6	1044.9	1042.7	1046.0	1044.9	1041.6	1059.4	1057.2	1058.3	1067.2	1069.4
27.5°	1010.5	1016.0	1012.7	1017.1	1016.0	1013.8	1030.5	1028.3	1031.6	1041.6	1042.7
30°	977.1	982.7	980.5	986.0	984.9	982.7	1000.5	999.4	1001.6	1010.5	1014.9
32.5°	946.0	948.2	948.2	952.7	953.8	951.6	968.2	968.2	971.6	979.3	984.9
35°	908.2	913.8	911.5	920.4	919.3	917.1	933.8	934.9	938.2	947.1	951.6
37.5°	873.7	876.0	876.0	883.7	886.0	882.6	897.1	901.5	904.9	912.6	920.4
40°	833.7	838.2	838.2	847.1	849.3	847.1	862.6	867.1	870.4	879.3	883.7
42.5°	794.8	798.1	800.4	808.2	812.6	810.4	824.8	830.4	833.7	843.7	848.2
45°	754.8	758.1	759.2	769.2	773.7	773.7	785.9	793.7	798.1	805.9	812.6
47.5°	714.8	715.9	719.2	728.1	734.8	734.8	747.0	753.7	759.2	767.0	773.7
50°	671.4	673.6	678.1	688.1	693.7	693.7	705.9	714.8	720.3	728.1	735.9
52.5°	628.1	631.4	635.8	645.9	652.5	653.6	663.6	674.8	678.1	687.0	694.8
55°	585.8	588.0	593.6	604.7	611.4	611.4	623.6	633.6	639.2	647.0	654.7
57.5°	541.4	544.7	550.3	561.4	568.0	569.2	580.3	590.3	596.9	604.7	613.6
60°	499.1	499.1	505.8	519.1	525.8	528.0	536.9	548.0	554.7	562.5	571.4
62.5°	454.7	454.7	462.4	473.6	481.3	483.6	495.8	505.8	512.5	520.2	530.2
65°	408.0	411.3	418.0	430.2	439.1	440.2	449.1	461.3	470.2	478.0	488.0
67.5°	363.5	367.9	372.4	384.6	394.6	396.9	406.9	419.1	426.9	434.6	446.9
70°	319.0	323.5	329.0	341.3	350.2	355.7	363.5	375.7	384.6	393.5	404.6
72.5°	274.6	279.0	284.6	297.9	307.9	313.5	321.3	335.7	343.5	352.4	364.6
75°	229.0	232.3	241.2	254.6	265.7	272.3	279.0	292.4	302.4	311.3	324.6
77.5°	184.5	190.1	197.9	211.2	222.3	227.9	235.7	252.3	261.2	272.3	284.6
80°	145.6	149.0	156.7	170.1	181.2	189.0	195.6	211.2	220.1	231.2	244.6
82.5°	105.6	110.1	117.8	131.2	144.5	151.2	156.7	172.3	182.3	193.4	204.5
85°	66.7	72.3	80.0	93.4	106.7	113.4	120.1	133.4	145.6	155.6	167.9
87.5°	31.1	36.7	45.6	57.8	70.0	77.8	83.4	97.8	108.9	120.1	131.2
90°	1.1	5.6	14.5	26.7	40.0	45.6	52.2	65.6	76.7	87.8	98.9
92.5°	0.0	4.4	13.3	25.6	37.8	44.5	50.0	63.4	74.5	85.6	96.7
95°	1.1	4.4	13.3	24.5	36.7	43.4	48.9	62.3	73.4	84.5	94.5
97.5°	1.1	4.4	13.3	24.5	36.7	42.2	48.9	61.1	72.3	83.4	93.4
100°	1.1	4.4	13.3	24.5	35.6	42.2	47.8	60.0	71.1	81.1	91.2
102.5°	1.1	4.4	13.3	23.3	35.6	41.1	46.7	58.9	70.0	80.0	90.0
105°	1.1	5.6	13.3	23.3	34.5	40.0	46.7	57.8	67.8	77.8	87.8
107.5°	2.2	5.6	13.3	23.3	34.5	40.0	45.6	56.7	66.7	76.7	85.6
110°	2.2	5.6	13.3	22.2	33.3	38.9	44.5	55.6	65.6	74.5	84.5



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	2.2	5.6	13.3	22.2	33.3	38.9	43.4	54.5	64.5	73.4	82.3
115°	2.2	5.6	12.2	22.2	32.2	37.8	42.2	53.4	62.3	71.1	80.0
117.5°	2.2	5.6	12.2	21.1	31.1	36.7	41.1	52.2	61.1	68.9	77.8
120°	3.3	5.6	12.2	21.1	30.0	35.6	40.0	50.0	58.9	67.8	75.6
122.5°	3.3	6.7	12.2	20.0	30.0	34.5	38.9	48.9	56.7	65.6	73.4
125°	3.3	6.7	12.2	20.0	28.9	33.3	37.8	46.7	55.6	63.4	70.0
127.5°	3.3	6.7	12.2	18.9	27.8	31.1	35.6	44.5	53.4	60.0	67.8
130°	3.3	6.7	11.1	17.8	25.6	30.0	33.3	42.2	50.0	57.8	64.5
132.5°	3.3	6.7	11.1	17.8	24.5	27.8	32.2	40.0	47.8	54.5	61.1
135°	3.3	5.6	10.0	16.7	23.3	26.7	30.0	37.8	44.5	51.1	57.8
137.5°	3.3	5.6	10.0	15.6	21.1	24.5	27.8	34.5	41.1	47.8	53.4
140°	4.4	5.6	10.0	14.5	20.0	23.3	25.6	32.2	37.8	43.4	50.0
142.5°	4.4	5.6	8.9	13.3	18.9	21.1	23.3	30.0	35.6	40.0	45.6
145°	4.4	5.6	8.9	13.3	17.8	20.0	22.2	27.8	32.2	36.7	42.2
147.5°	4.4	5.6	8.9	12.2	16.7	18.9	20.0	25.6	30.0	33.3	37.8
150°	5.6	6.7	8.9	12.2	15.6	16.7	18.9	23.3	26.7	31.1	34.5
152.5°	5.6	6.7	8.9	11.1	14.5	15.6	17.8	21.1	24.5	27.8	31.1
155°	5.6	6.7	7.8	10.0	13.3	14.5	16.7	18.9	22.2	24.5	27.8
157.5°	5.6	6.7	7.8	10.0	12.2	13.3	14.5	17.8	20.0	22.2	24.5
160°	5.6	6.7	7.8	8.9	11.1	12.2	13.3	15.6	17.8	20.0	21.1
162.5°	5.6	6.7	7.8	8.9	10.0	11.1	12.2	13.3	15.6	16.7	18.9
165°	5.6	6.7	6.7	7.8	10.0	10.0	11.1	12.2	13.3	14.5	15.6
167.5°	5.6	5.6	6.7	7.8	8.9	8.9	10.0	11.1	12.2	12.2	13.3
170°	5.6	5.6	6.7	6.7	7.8	7.8	8.9	8.9	10.0	11.1	11.1
172.5°	5.6	5.6	6.7	6.7	6.7	7.8	7.8	7.8	8.9	8.9	8.9
175°	5.6	5.6	6.7	6.7	6.7	6.7	6.7	6.7	6.7	6.7	7.8
177.5°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
180°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6



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CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1195.0	1195.0	1195.0	1195.0	1195.0	1195.0	1195.0	1195.0	1195.0	1195.0
2.5°	1196.1	1198.3	1199.4	1196.1	1191.7	1195.0	1200.6	1193.9	1188.3	1200.6
5°	1193.9	1196.1	1196.1	1193.9	1190.6	1193.9	1199.4	1193.9	1188.3	1202.8
7.5°	1189.4	1190.6	1190.6	1188.3	1186.1	1190.6	1196.1	1190.6	1185.0	1199.4
10°	1181.7	1182.8	1182.8	1181.7	1178.3	1181.7	1187.2	1182.8	1177.2	1190.6
12.5°	1170.5	1171.7	1172.8	1170.5	1168.3	1173.9	1178.3	1172.8	1167.2	1182.8
15°	1156.1	1158.3	1158.3	1159.4	1156.1	1161.6	1166.1	1161.6	1156.1	1170.5
17.5°	1139.4	1141.6	1142.8	1142.8	1140.5	1145.0	1149.4	1145.0	1140.5	1155.0
20°	1119.4	1119.4	1122.7	1122.7	1121.6	1127.2	1131.6	1126.1	1121.6	1136.1
22.5°	1098.3	1098.3	1099.4	1099.4	1099.4	1105.0	1110.5	1105.0	1100.5	1115.0
25°	1071.6	1072.7	1073.8	1077.2	1074.9	1080.5	1086.1	1080.5	1074.9	1090.5
27.5°	1046.0	1046.0	1047.2	1050.5	1049.4	1054.9	1059.4	1053.8	1050.5	1063.8
30°	1018.2	1018.2	1019.4	1022.7	1022.7	1028.3	1031.6	1026.0	1023.8	1036.0
32.5°	988.2	988.2	989.3	993.8	993.8	998.2	1002.7	998.2	996.0	1008.2
35°	954.9	956.0	958.2	962.7	963.8	968.2	972.7	968.2	964.9	977.1
37.5°	922.6	922.6	923.8	930.4	931.5	937.1	941.5	937.1	933.8	946.0
40°	888.2	888.2	890.4	897.1	899.3	902.6	908.2	903.8	900.4	911.5
42.5°	852.6	853.7	857.1	862.6	864.8	869.3	873.7	870.4	866.0	877.1
45°	815.9	818.2	820.4	828.2	830.4	833.7	839.3	834.8	832.6	843.7
47.5°	779.2	779.2	782.6	791.5	793.7	795.9	801.5	799.3	795.9	805.9
50°	740.3	741.5	744.8	752.6	755.9	758.1	764.8	762.6	759.2	768.1
52.5°	700.3	701.4	707.0	714.8	718.1	721.4	727.0	725.9	721.4	730.3
55°	660.3	662.5	669.2	677.0	679.2	682.5	689.2	685.9	685.9	691.4
57.5°	619.2	622.5	629.2	637.0	639.2	642.5	649.2	647.0	645.9	651.4
60°	578.0	582.5	589.2	596.9	601.4	602.5	610.3	609.2	606.9	612.5
62.5°	538.0	542.5	549.1	558.0	560.3	563.6	571.4	569.2	568.0	571.4
65°	495.8	500.2	509.1	518.0	520.2	523.6	531.4	529.1	526.9	531.4
67.5°	454.7	461.3	468.0	476.9	480.2	482.4	491.3	490.2	488.0	492.4
70°	413.5	420.2	428.0	436.9	440.2	443.5	451.3	450.2	450.2	453.5
72.5°	373.5	380.2	389.1	398.0	402.4	403.5	410.2	410.2	411.3	413.5
75°	333.5	340.2	349.1	357.9	360.2	364.6	371.3	370.2	371.3	373.5
77.5°	293.5	301.3	310.1	319.0	322.4	323.5	331.3	331.3	332.4	335.7
80°	254.6	262.3	271.2	280.1	283.5	283.5	291.2	292.4	293.5	295.7
82.5°	214.5	222.3	231.2	240.1	244.6	246.8	253.5	253.5	254.6	256.8
85°	176.7	183.4	193.4	201.2	204.5	206.8	213.4	214.5	215.7	217.9
87.5°	140.1	149.0	156.7	165.6	169.0	171.2	176.7	177.9	180.1	181.2
90°	108.9	117.8	126.7	134.5	137.8	140.1	146.7	149.0	150.1	151.2
92.5°	106.7	115.6	123.4	131.2	134.5	136.7	142.3	144.5	146.7	146.7
95°	105.6	113.4	121.2	130.1	132.3	134.5	140.1	142.3	144.5	144.5
97.5°	103.4	111.2	120.1	127.8	130.1	133.4	137.8	140.1	142.3	142.3
100°	101.2	110.1	117.8	125.6	127.8	130.1	135.6	137.8	140.1	140.1
102.5°	98.9	107.8	115.6	122.3	125.6	127.8	132.3	134.5	136.7	136.7
105°	97.8	105.6	113.4	120.1	122.3	124.5	130.1	132.3	134.5	133.4
107.5°	95.6	102.3	110.1	117.8	120.1	122.3	126.7	128.9	131.2	130.1
110°	93.4	100.0	107.8	114.5	116.7	118.9	123.4	125.6	127.8	126.7



TEST NUMBER: P288459

CATALOG NUMBER: 4WNLED-LD4-40SL-F-UNV-L840-CD1-U

CANDELA DISTRIBUTION (continued):

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	91.2	97.8	104.5	111.2	113.4	115.6	120.1	122.3	124.5	123.4
115°	87.8	94.5	102.3	107.8	110.1	112.3	116.7	118.9	120.1	120.1
117.5°	85.6	92.3	98.9	105.6	106.7	108.9	112.3	114.5	116.7	115.6
120°	83.4	88.9	95.6	101.2	103.4	105.6	108.9	111.2	112.3	112.3
122.5°	80.0	86.7	92.3	97.8	100.0	101.2	105.6	106.7	108.9	107.8
125°	77.8	83.4	88.9	94.5	96.7	97.8	101.2	103.4	104.5	103.4
127.5°	74.5	80.0	85.6	91.2	92.3	94.5	96.7	98.9	100.0	100.0
130°	71.1	76.7	82.3	87.8	88.9	90.0	93.4	94.5	95.6	95.6
132.5°	67.8	73.4	78.9	83.4	84.5	86.7	88.9	91.2	92.3	91.2
135°	64.5	68.9	74.5	78.9	81.1	82.3	84.5	85.6	87.8	86.7
137.5°	60.0	65.6	70.0	74.5	76.7	77.8	80.0	81.1	82.3	82.3
140°	56.7	61.1	66.7	71.1	72.3	73.4	75.6	76.7	77.8	77.8
142.5°	52.2	56.7	61.1	65.6	67.8	68.9	71.1	72.3	73.4	72.3
145°	47.8	51.1	56.7	61.1	62.3	63.4	66.7	67.8	67.8	67.8
147.5°	43.4	46.7	51.1	55.6	57.8	58.9	61.1	62.3	63.4	63.4
150°	38.9	42.2	46.7	50.0	52.2	53.4	56.7	56.7	57.8	57.8
152.5°	34.5	37.8	41.1	45.6	46.7	48.9	51.1	52.2	52.2	52.2
155°	31.1	33.3	36.7	40.0	41.1	42.2	45.6	46.7	47.8	46.7
157.5°	26.7	30.0	32.2	34.5	35.6	36.7	40.0	41.1	42.2	42.2
160°	23.3	25.6	27.8	30.0	30.0	32.2	34.5	35.6	36.7	35.6
162.5°	20.0	21.1	23.3	24.5	25.6	26.7	28.9	30.0	31.1	31.1
165°	17.8	17.8	18.9	20.0	21.1	22.2	23.3	24.5	25.6	25.6
167.5°	14.5	15.6	15.6	16.7	16.7	17.8	17.8	20.0	21.1	21.1
170°	12.2	12.2	12.2	13.3	13.3	13.3	13.3	14.5	16.7	16.7
172.5°	10.0	10.0	10.0	10.0	10.0	10.0	10.0	11.1	11.1	12.2
175°	7.8	7.8	7.8	7.8	6.7	7.8	6.7	6.7	7.8	7.8
177.5°	5.6	5.6	5.6	5.6	5.6	5.6	4.4	4.4	4.4	4.4
180°	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6

(END OF REPORT)