

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: P288451

Luminaire Tested: **2WNLED-LD4-28SL-F-UNV-L840-CD1-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P288451  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1902-121-1)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 2WNLED-LD4-28SL-F-UNV-L840-CD1-U  
Description: 2FT WNLED WRAPAROUND  
Light Source: (56) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

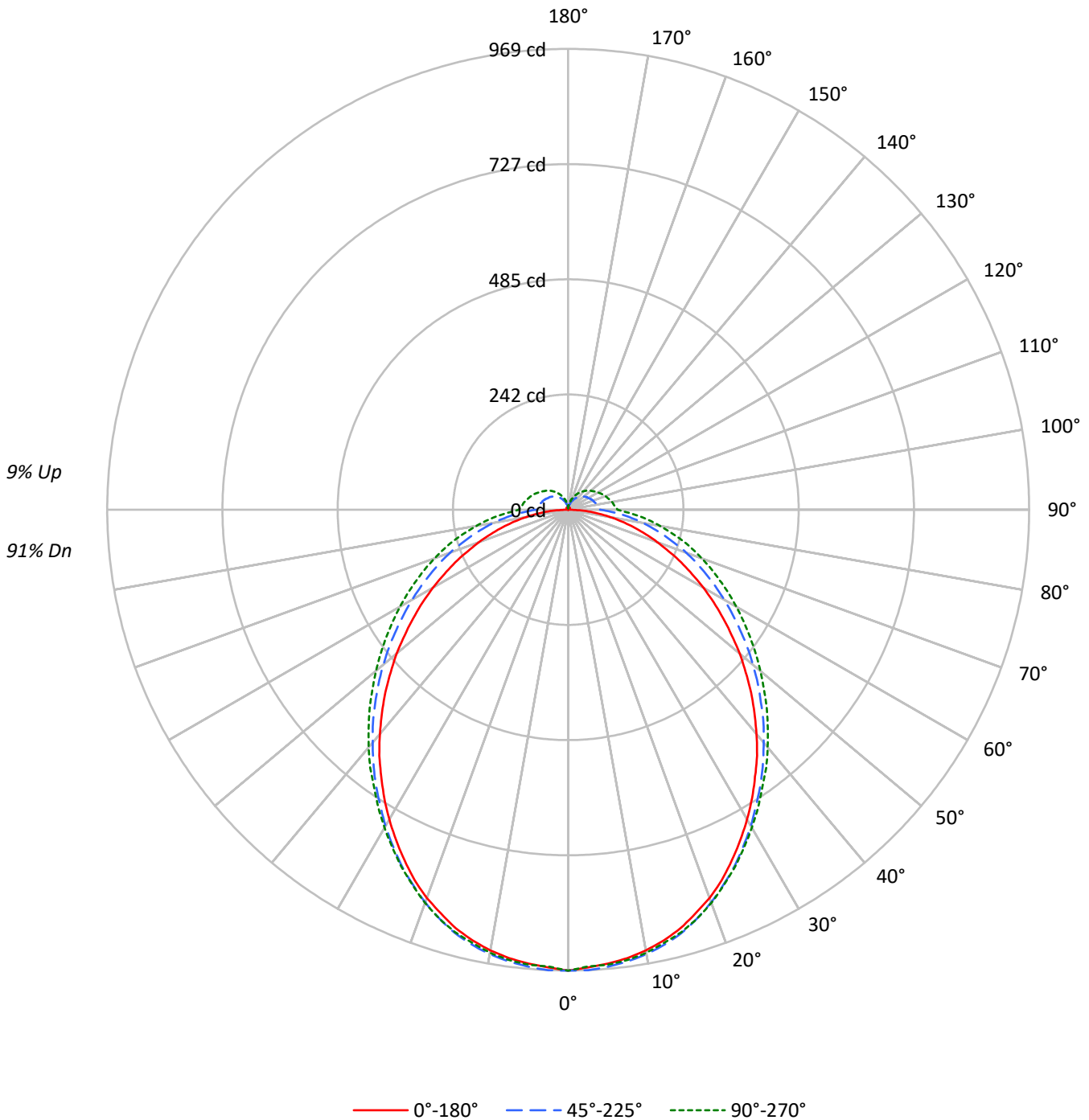
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2907.0 lumens  
Efficiency: N/A  
Efficacy: 120.1 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.19 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 1' x L: 2' x H: 0.12')  
CIE Type: Direct  
  
Input Watts (W): 24.2  
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	50	30	10	0	
RCR																						
0	117	117	117	117	113	113	113	113	106	106	106	100	100	100	94	94	94	94	94	94	91	
1	106	101	96	92	102	97	93	90	92	88	85	86	83	81	81	79	77	77	77	77	74	
2	96	87	80	74	92	85	78	73	80	74	70	75	71	67	71	67	64	64	64	64	61	
3	87	77	68	62	84	74	67	61	70	64	58	66	61	56	63	58	54	54	54	54	52	
4	80	68	59	52	77	66	58	52	62	55	50	59	53	48	56	51	47	47	47	47	44	
5	74	61	52	45	71	59	51	44	56	49	43	53	47	42	50	45	41	41	41	41	38	
6	68	55	46	39	66	53	45	39	51	43	38	48	42	37	46	40	36	36	36	36	34	
7	63	50	41	35	61	48	40	34	46	39	34	44	37	33	42	36	32	32	32	32	30	
8	59	45	37	31	57	44	36	31	42	35	30	40	34	29	38	33	29	29	29	29	27	
9	55	42	34	28	53	41	33	28	39	32	27	37	31	27	36	30	26	26	26	26	24	
10	52	38	31	25	50	38	30	25	36	29	25	35	28	24	33	28	24	24	24	24	22	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5217	5217	5217
5°	5149	5150	5131
10°	5086	5068	5058
15°	4995	4959	4958
20°	4865	4802	4820
25°	4696	4626	4652
30°	4510	4435	4476
35°	4311	4240	4297
40°	4110	4041	4148
45°	3894	3851	3994
50°	3666	3666	3843
55°	3422	3479	3713
60°	3188	3318	3614
65°	2944	3164	3531
70°	2675	3047	3499
75°	2399	2912	3515
80°	2069	2804	3557
85°	1538	2720	3771



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.6	3.1
10°-20°	259.0	8.9
20°-30°	380.1	13.1
30°-40°	439.8	15.1
40°-50°	440.2	15.1
50°-60°	391.6	13.5
60°-70°	311.7	10.7
70°-80°	215.6	7.4
80°-90°	114.6	3.9
90°-100°	63.1	2.2
100°-110°	55.7	1.9
110°-120°	46.9	1.6
120°-130°	37.4	1.3
130°-140°	27.7	1.0
140°-150°	18.0	0.6
150°-160°	9.5	0.3
160°-170°	3.7	0.1
170°-180°	0.7	0.0
0°-30°	730.7	25.1
0°-40°	1170.5	40.3
0°-60°	2002.3	68.9
0°-90°	2644.3	91.0
90°-120°	165.7	5.7
90°-150°	248.8	8.6
90°-180°	263.0	9.0
0°-180°	2907.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	969	969	969	969	969	
5°	958	966	964	965	960	91
15°	911	920	922	924	920	256
25°	814	823	827	831	829	375
35°	685	696	705	712	711	429
45°	544	558	573	585	590	419
55°	397	417	441	459	466	356
65°	262	288	319	343	352	259
75°	142	173	209	236	248	151
85°	43	73	111	138	148	44
90°	0	30	67	94	104	3
95°	0	28	64	89	98	0
105°	2	26	58	80	88	2
115°	3	24	53	71	78	3
125°	4	22	47	62	67	4
135°	5	19	40	53	57	4
145°	5	15	32	42	45	3
155°	5	11	21	30	32	2
165°	6	9	12	16	19	2
175°	6	6	6	6	7	1
180°	5	5	5	5	5	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3
2.5°	963.2	964.3	971.4	972.4	968.3	972.4	971.4	968.3	971.4	968.3	969.3
5°	958.2	959.2	965.3	966.3	963.2	966.3	966.3	963.2	967.3	964.3	964.3
7.5°	951.1	952.1	957.2	959.2	955.1	959.2	959.2	957.2	960.2	957.2	958.2
10°	940.9	941.9	947.0	950.0	947.0	949.0	949.0	948.0	951.1	948.0	949.0
12.5°	927.7	927.7	933.8	936.8	932.8	935.8	936.8	933.8	937.8	935.8	936.8
15°	911.4	910.4	916.5	919.6	916.5	919.6	919.6	918.5	921.6	919.6	921.6
17.5°	890.1	890.1	895.2	898.2	896.2	898.2	900.3	898.2	901.3	900.3	901.3
20°	868.8	867.7	873.8	875.9	874.8	877.9	877.9	875.9	879.9	878.9	878.9
22.5°	843.4	841.3	847.4	850.5	849.4	851.5	852.5	850.5	854.5	853.5	853.5
25°	813.9	812.9	819.0	822.0	821.0	823.0	825.1	823.0	826.1	826.1	827.1
27.5°	783.4	782.4	787.5	791.5	791.5	793.6	795.6	793.6	797.6	797.6	797.6
30°	751.9	750.9	755.0	760.0	760.0	763.1	765.1	762.1	767.1	767.1	768.2
32.5°	719.4	718.4	723.5	726.5	727.5	729.5	732.6	730.6	735.6	734.6	735.6
35°	684.8	683.8	688.9	693.0	695.0	696.0	699.1	698.1	702.1	702.1	705.2
37.5°	652.3	651.3	654.4	659.4	660.5	662.5	665.5	664.5	669.6	669.6	672.6
40°	615.7	614.7	619.8	622.9	625.9	626.9	630.0	630.0	636.1	636.1	639.1
42.5°	579.2	579.2	583.2	588.3	590.3	592.4	595.4	596.4	600.5	603.6	607.6
45°	543.6	543.6	546.7	551.7	555.8	557.8	560.9	561.9	566.0	570.0	573.1
47.5°	506.0	507.0	511.1	515.2	520.2	521.3	526.3	527.3	533.4	535.5	540.6
50°	470.4	470.4	474.5	479.6	485.7	486.7	490.8	492.8	498.9	501.9	507.0
52.5°	432.9	434.9	438.9	445.0	450.1	451.1	456.2	458.3	464.4	468.4	474.5
55°	397.3	399.3	403.4	410.5	415.6	416.6	421.7	424.7	430.8	435.9	441.0
57.5°	362.7	364.8	367.8	374.9	381.0	383.1	387.1	392.2	398.3	403.4	409.5
60°	328.2	329.2	335.3	341.4	348.5	350.5	355.6	358.7	367.8	372.9	379.0
62.5°	293.6	296.7	302.8	308.9	316.0	318.0	322.1	328.2	336.3	342.4	348.5
65°	262.2	265.2	270.3	276.4	284.5	287.6	291.6	298.7	305.8	311.9	319.1
67.5°	228.6	232.7	237.8	245.9	255.0	257.1	263.2	269.3	277.4	283.5	291.6
70°	199.2	203.2	208.3	215.4	223.5	226.6	231.7	240.8	248.9	256.1	264.2
72.5°	170.7	173.8	179.8	188.0	196.1	199.2	204.2	212.4	220.5	228.6	234.7
75°	142.3	146.3	152.4	159.5	169.7	172.7	177.8	185.9	194.1	202.2	209.3
77.5°	115.8	119.9	126.0	134.1	143.3	147.3	152.4	160.5	168.7	176.8	183.9
80°	90.4	94.5	99.6	108.7	117.9	121.9	127.0	135.1	143.3	151.4	158.5
82.5°	66.0	69.1	75.2	83.3	93.5	96.5	102.6	110.8	118.9	128.0	135.1
85°	42.7	45.7	51.8	59.9	69.1	73.2	78.2	86.4	95.5	103.6	110.8
87.5°	19.3	23.4	29.5	36.6	46.7	50.8	55.9	64.0	72.1	80.3	87.4
90°	0.0	4.1	10.2	17.3	26.4	30.5	35.6	43.7	51.8	59.9	67.1
92.5°	0.0	3.0	9.1	17.3	25.4	29.5	33.5	41.7	49.8	57.9	65.0
95°	0.0	3.0	9.1	16.3	24.4	28.5	33.5	40.6	48.8	56.9	64.0
97.5°	1.0	3.0	9.1	16.3	24.4	28.5	32.5	40.6	47.8	55.9	63.0
100°	1.0	3.0	9.1	16.3	24.4	27.4	31.5	39.6	46.7	54.9	61.0
102.5°	1.0	4.1	9.1	16.3	23.4	27.4	31.5	38.6	45.7	52.8	59.9
105°	2.0	4.1	9.1	15.2	23.4	26.4	30.5	37.6	44.7	51.8	57.9
107.5°	2.0	4.1	9.1	15.2	22.4	26.4	30.5	37.6	44.7	50.8	56.9
110°	2.0	4.1	9.1	15.2	22.4	25.4	29.5	36.6	42.7	49.8	55.9



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	2.0	5.1	9.1	15.2	22.4	25.4	28.5	35.6	41.7	47.8	53.9
115°	3.0	5.1	9.1	15.2	21.3	24.4	28.5	34.5	40.6	46.7	52.8
117.5°	3.0	5.1	10.2	15.2	21.3	24.4	27.4	34.5	39.6	45.7	50.8
120°	3.0	5.1	9.1	15.2	20.3	23.4	27.4	33.5	38.6	44.7	48.8
122.5°	4.1	6.1	10.2	15.2	20.3	23.4	26.4	32.5	37.6	42.7	47.8
125°	4.1	6.1	10.2	14.2	20.3	22.4	25.4	31.5	36.6	41.7	46.7
127.5°	4.1	6.1	10.2	14.2	19.3	22.4	24.4	30.5	35.6	40.6	44.7
130°	4.1	6.1	9.1	14.2	19.3	21.3	23.4	29.5	34.5	38.6	42.7
132.5°	5.1	6.1	10.2	14.2	18.3	20.3	23.4	27.4	32.5	37.6	41.7
135°	5.1	6.1	9.1	13.2	17.3	19.3	22.4	26.4	31.5	35.6	39.6
137.5°	5.1	6.1	9.1	12.2	17.3	19.3	21.3	25.4	29.5	33.5	37.6
140°	5.1	6.1	9.1	12.2	16.3	17.3	19.3	23.4	28.5	31.5	35.6
142.5°	5.1	6.1	9.1	12.2	15.2	17.3	18.3	22.4	26.4	30.5	33.5
145°	5.1	6.1	8.1	11.2	14.2	15.2	17.3	20.3	24.4	27.4	31.5
147.5°	5.1	6.1	8.1	10.2	13.2	14.2	16.3	19.3	22.4	25.4	28.5
150°	5.1	6.1	8.1	10.2	12.2	13.2	15.2	17.3	20.3	23.4	26.4
152.5°	5.1	6.1	7.1	9.1	11.2	12.2	13.2	16.3	18.3	21.3	23.4
155°	5.1	6.1	7.1	9.1	10.2	11.2	12.2	14.2	17.3	19.3	21.3
157.5°	5.1	5.1	7.1	8.1	10.2	10.2	11.2	13.2	15.2	17.3	19.3
160°	5.1	6.1	7.1	7.1	9.1	9.1	10.2	12.2	13.2	15.2	16.3
162.5°	6.1	6.1	7.1	8.1	8.1	9.1	9.1	11.2	12.2	13.2	14.2
165°	6.1	6.1	7.1	7.1	8.1	9.1	9.1	10.2	11.2	12.2	12.2
167.5°	6.1	6.1	6.1	7.1	8.1	8.1	8.1	9.1	9.1	10.2	11.2
170°	6.1	6.1	6.1	7.1	7.1	7.1	8.1	8.1	8.1	9.1	9.1
172.5°	6.1	6.1	6.1	6.1	7.1	7.1	7.1	7.1	7.1	7.1	7.1
175°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	7.1	7.1	6.1
177.5°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1
180°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1



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**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3	969.3
2.5°	971.4	970.4	967.3	968.3	968.3	964.3	966.3	965.3	965.3	961.2
5°	966.3	966.3	964.3	966.3	965.3	963.2	964.3	964.3	963.2	960.2
7.5°	960.2	960.2	959.2	961.2	960.2	957.2	959.2	959.2	959.2	955.1
10°	951.1	951.1	949.0	951.1	951.1	948.0	949.0	949.0	948.0	946.0
12.5°	938.9	937.8	936.8	937.8	937.8	934.8	935.8	936.8	936.8	932.8
15°	923.6	922.6	921.6	923.6	923.6	920.6	922.6	922.6	922.6	919.6
17.5°	904.3	904.3	903.3	905.3	905.3	901.3	904.3	905.3	904.3	901.3
20°	882.0	880.9	880.9	883.0	883.0	878.9	882.0	883.0	882.0	879.9
22.5°	856.6	856.6	856.6	856.6	857.6	854.5	857.6	857.6	856.6	854.5
25°	829.1	830.1	828.1	830.1	831.2	827.1	830.1	831.2	830.1	829.1
27.5°	800.7	800.7	800.7	802.7	803.7	799.7	802.7	803.7	802.7	800.7
30°	771.2	771.2	771.2	772.2	773.2	770.2	774.3	774.3	773.2	772.2
32.5°	739.7	739.7	740.7	741.7	743.8	739.7	743.8	743.8	743.8	742.8
35°	707.2	708.2	709.2	710.2	712.3	709.2	712.3	713.3	713.3	711.3
37.5°	675.7	676.7	678.7	679.8	680.8	678.7	682.8	682.8	682.8	683.8
40°	643.2	643.2	646.2	647.2	649.3	647.2	650.3	651.3	651.3	652.3
42.5°	609.7	611.7	614.7	615.7	616.8	615.7	618.8	619.8	619.8	620.8
45°	576.1	579.2	581.2	583.2	585.3	583.2	586.3	587.3	588.3	590.3
47.5°	543.6	544.6	548.7	551.7	553.8	551.7	554.8	556.8	556.8	557.8
50°	510.1	514.1	517.2	519.2	521.3	520.2	524.3	526.3	525.3	527.3
52.5°	477.6	481.6	485.7	487.7	490.8	488.7	492.8	494.8	494.8	496.9
55°	445.0	450.1	454.2	457.2	459.3	458.3	463.3	464.4	464.4	466.4
57.5°	413.5	418.6	422.7	425.7	428.8	427.8	432.9	434.9	434.9	436.9
60°	383.1	388.1	393.2	397.3	400.3	399.3	404.4	406.4	406.4	408.5
62.5°	353.6	359.7	363.8	368.8	370.9	370.9	376.0	378.0	378.0	380.0
65°	325.1	330.2	335.3	340.4	343.4	343.4	347.5	350.5	350.5	351.6
67.5°	296.7	302.8	308.9	313.0	316.0	316.0	321.1	324.1	323.1	325.1
70°	270.3	275.4	281.5	286.5	289.6	289.6	294.7	297.7	297.7	298.7
72.5°	242.8	250.0	256.1	261.1	263.2	265.2	269.3	271.3	271.3	273.3
75°	216.4	222.5	227.6	233.7	235.7	236.7	241.8	245.9	245.9	247.9
77.5°	192.0	198.1	204.2	208.3	210.3	211.3	215.4	218.5	219.5	220.5
80°	166.6	173.8	178.8	183.9	185.9	187.0	191.0	194.1	194.1	196.1
82.5°	143.3	149.4	154.4	158.5	161.6	161.6	166.6	169.7	170.7	171.7
85°	118.9	125.0	130.1	135.1	138.2	138.2	142.3	145.3	146.3	148.3
87.5°	95.5	101.6	106.7	111.8	113.8	114.8	119.9	121.9	122.9	122.9
90°	74.2	81.3	86.4	91.4	93.5	95.5	98.6	101.6	102.6	103.6
92.5°	72.1	78.2	84.3	88.4	91.4	92.5	96.5	98.6	99.6	100.6
95°	70.1	76.2	82.3	86.4	89.4	90.4	93.5	96.5	96.5	97.5
97.5°	69.1	75.2	80.3	84.3	87.4	88.4	91.4	93.5	94.5	95.5
100°	68.1	73.2	78.2	82.3	84.3	86.4	89.4	91.4	92.5	93.5
102.5°	66.0	71.1	76.2	80.3	82.3	83.3	87.4	89.4	89.4	90.4
105°	64.0	69.1	74.2	78.2	80.3	81.3	84.3	86.4	87.4	88.4
107.5°	63.0	68.1	72.1	76.2	78.2	79.3	82.3	84.3	84.3	85.4
110°	61.0	66.0	70.1	74.2	75.2	77.2	79.3	81.3	82.3	83.3





TEST NUMBER: P288451

CATALOG NUMBER: 2WNLED-LD4-28SL-F-UNV-L840-CD1-U

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	58.9	64.0	68.1	72.1	73.2	74.2	77.2	79.3	79.3	80.3
115°	57.9	62.0	66.0	69.1	71.1	72.1	74.2	76.2	77.2	78.2
117.5°	55.9	59.9	64.0	67.1	69.1	70.1	72.1	74.2	74.2	75.2
120°	53.9	57.9	62.0	65.0	66.0	67.1	70.1	71.1	71.1	72.1
122.5°	52.8	55.9	59.9	63.0	64.0	65.0	67.1	68.1	69.1	70.1
125°	50.8	53.9	57.9	59.9	62.0	63.0	65.0	66.0	66.0	67.1
127.5°	48.8	52.8	55.9	57.9	58.9	59.9	62.0	63.0	64.0	64.0
130°	46.7	50.8	53.9	55.9	56.9	57.9	59.9	61.0	61.0	62.0
132.5°	45.7	48.8	51.8	53.9	54.9	55.9	56.9	58.9	58.9	58.9
135°	42.7	46.7	49.8	50.8	52.8	52.8	54.9	55.9	55.9	56.9
137.5°	41.7	43.7	46.7	48.8	49.8	50.8	51.8	52.8	53.9	53.9
140°	38.6	41.7	44.7	46.7	46.7	47.8	49.8	50.8	50.8	50.8
142.5°	36.6	39.6	41.7	43.7	44.7	44.7	46.7	47.8	47.8	47.8
145°	34.5	36.6	39.6	40.6	41.7	42.7	43.7	44.7	44.7	44.7
147.5°	31.5	34.5	36.6	38.6	38.6	39.6	40.6	41.7	41.7	41.7
150°	29.5	31.5	33.5	35.6	36.6	36.6	37.6	38.6	38.6	38.6
152.5°	26.4	28.5	30.5	32.5	33.5	33.5	34.5	35.6	35.6	35.6
155°	23.4	25.4	27.4	29.5	30.5	30.5	31.5	31.5	31.5	32.5
157.5°	20.3	22.4	24.4	26.4	26.4	27.4	28.5	28.5	28.5	29.5
160°	18.3	19.3	21.3	22.4	23.4	23.4	24.4	25.4	25.4	25.4
162.5°	16.3	17.3	18.3	19.3	20.3	20.3	21.3	22.4	22.4	22.4
165°	13.2	14.2	15.2	16.3	16.3	17.3	18.3	19.3	19.3	19.3
167.5°	11.2	12.2	13.2	13.2	13.2	14.2	15.2	15.2	16.3	16.3
170°	9.1	10.2	10.2	10.2	11.2	11.2	11.2	12.2	13.2	13.2
172.5°	8.1	8.1	8.1	8.1	8.1	8.1	9.1	9.1	10.2	10.2
175°	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	7.1	7.1
177.5°	6.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	4.1	3.0
180°	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1

(END OF REPORT)