

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: P34050

Luminaire Tested: **2BCLED-LD4-8SL-F-UNV-L835-CD1-U**

Test Date: 04/05/15



Test Information

Test Method: LM-79-08
Report Number: P34050
Test Lab: INNOVATION CENTER-P3
Test Date: 04/05/15
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2BCLED-LD4-8SL-F-UNV-L835-CD1-U
Description:
Light Source: (56) COOPER LIGHTING 3500K LEDs
Ballast/Driver: (1) ELECTRONIC DRIVER

Summary

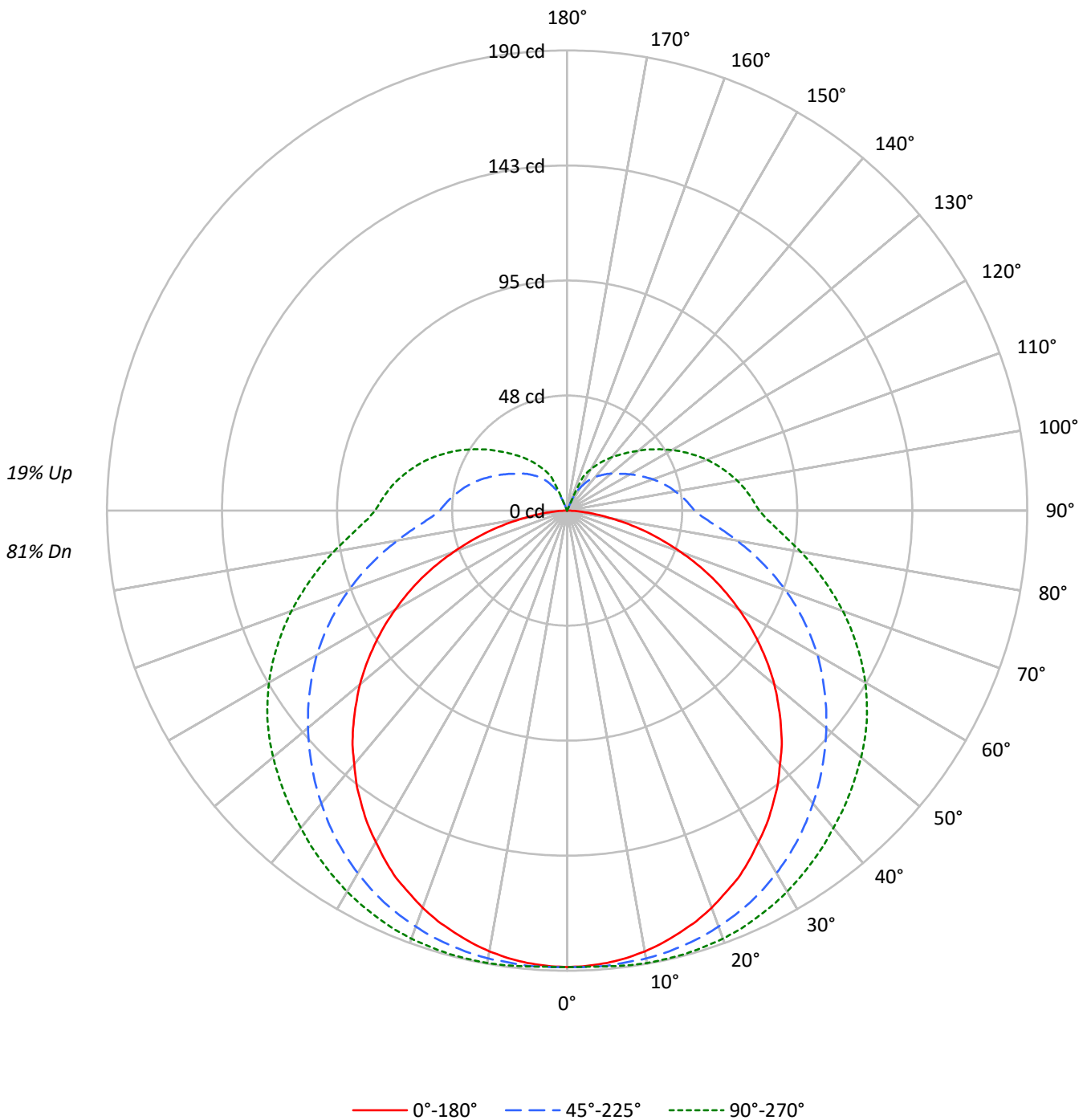
Lumens per Lamp: N/A
Luminaire Lumens: 896.8 lumens
Efficiency: N/A
Efficacy: 88.8 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.44 / 1.51
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 2' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 10.1
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

TEST NUMBER: P34050

CATALOG NUMBER: 2BCLED-LD4-8SL-F-UNV-L835-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P34050

CATALOG NUMBER: 2BCLED-LD4-8SL-F-UNV-L835-CD1-U

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	115	115	115	115	110	110	110	110	101	101	101	92	92	92	85	85	85	81			
1	102	96	91	86	97	92	87	83	84	80	77	77	74	71	70	68	66	62			
2	91	82	74	68	87	78	71	65	72	66	61	66	61	57	60	56	53	50			
3	83	71	62	55	78	68	60	53	62	56	50	57	51	47	52	48	44	41			
4	75	62	53	46	71	60	51	44	55	48	42	50	44	39	46	41	37	34			
5	69	55	46	39	65	53	44	38	49	41	36	45	39	34	41	36	32	29			
6	63	50	40	33	60	48	39	33	44	36	31	40	34	29	37	32	27	25			
7	59	45	36	29	56	43	34	28	40	32	27	37	30	26	34	28	24	22			
8	54	41	32	26	52	39	31	25	36	29	24	33	27	23	31	25	21	19			
9	51	37	29	23	48	36	28	22	33	26	21	31	25	20	28	23	19	17			
10	47	34	26	21	45	33	25	20	31	24	19	28	22	18	26	21	17	15			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2705	2705	2705
5°	2677	2612	2595
10°	2645	2529	2518
15°	2606	2455	2450
20°	2568	2387	2390
25°	2527	2323	2332
30°	2470	2257	2280
35°	2418	2192	2230
40°	2355	2126	2185
45°	2294	2064	2154
50°	2219	2005	2129
55°	2119	1948	2108
60°	1996	1896	2080
65°	1843	1832	2046
70°	1621	1764	2011
75°	1350	1685	1976
80°	956	1610	1949
85°	474	1560	1949



TEST NUMBER: P34050

CATALOG NUMBER: 2BCLED-LD4-8SL-F-UNV-L835-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	18.0	2.0
10°-20°	52.4	5.8
20°-30°	81.9	9.1
30°-40°	103.0	11.5
40°-50°	113.9	12.7
50°-60°	114.0	12.7
60°-70°	103.0	11.5
70°-80°	82.8	9.2
80°-90°	60.3	6.7
90°-100°	48.2	5.4
100°-110°	40.0	4.5
110°-120°	31.0	3.5
120°-130°	22.3	2.5
130°-140°	14.7	1.6
140°-150°	8.5	1.0
150°-160°	2.8	0.3
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	152.3	17.0
0°-40°	255.3	28.5
0°-60°	483.2	53.9
0°-90°	729.3	81.3
90°-120°	119.2	13.3
90°-150°	164.8	18.4
90°-180°	168.0	18.7
0°-180°	896.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	188	188	188	188	188	
5°	188	188	189	189	189	18
15°	180	182	186	189	189	51
25°	167	171	179	184	185	77
35°	148	155	166	174	177	93
45°	125	134	149	161	165	96
55°	97	110	130	145	151	87
65°	66	83	108	126	132	66
75°	34	56	83	103	110	36
85°	6	31	60	80	87	8
90°	0	24	53	72	79	0
95°	0	21	49	68	75	0
105°	0	16	42	60	66	0
115°	0	13	34	50	56	0
125°	0	11	26	39	44	0
135°	0	8	21	30	33	0
145°	0	5	15	22	24	0
155°	0	2	8	14	15	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P34050

CATALOG NUMBER: 2BCLED-LD4-8SL-F-UNV-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	188.5	188.5	188.5	188.5	188.5	188.5	188.5	188.5	188.5	188.5	188.5
2.5°	188.2	188.0	187.9	188.0	188.2	188.5	188.6	188.7	188.7	188.6	188.6
5°	187.5	187.4	187.3	187.5	187.7	188.0	188.3	188.6	188.6	188.7	188.7
7.5°	186.4	186.3	186.2	186.4	186.8	187.1	187.5	188.0	188.1	188.1	188.5
10°	184.8	184.8	184.9	185.2	185.6	186.1	186.6	187.2	187.6	187.8	188.3
12.5°	182.8	182.9	183.1	183.4	183.9	184.7	185.3	186.0	186.6	187.0	187.5
15°	180.3	180.3	180.7	181.2	181.9	182.7	183.5	184.4	185.3	185.9	186.6
17.5°	177.7	177.6	178.0	178.8	179.6	180.6	181.5	182.7	183.6	184.6	185.4
20°	174.5	174.6	175.2	175.9	176.9	178.1	179.2	180.8	181.8	182.8	184.0
22.5°	170.8	171.1	171.7	172.6	173.9	175.3	176.7	178.1	179.5	180.8	182.1
25°	167.3	167.1	167.9	169.2	170.4	172.1	173.7	175.3	176.9	178.6	180.0
27.5°	162.8	163.1	163.9	165.2	166.9	168.7	170.6	172.4	174.1	175.9	177.6
30°	158.0	158.6	159.6	161.2	162.9	164.8	166.8	168.9	170.9	172.9	174.8
32.5°	153.4	153.6	155.0	156.5	158.7	160.8	163.0	165.4	167.6	169.6	171.7
35°	148.1	148.6	149.9	151.8	154.1	156.3	158.8	161.4	163.7	166.0	168.3
37.5°	142.8	143.2	144.6	146.6	149.0	151.7	154.2	157.0	159.6	162.1	164.7
40°	136.7	137.4	139.2	141.5	143.9	146.7	149.6	152.6	155.3	157.9	160.7
42.5°	131.2	131.8	133.5	135.8	138.6	141.6	144.7	147.6	150.9	153.7	156.6
45°	124.8	125.4	127.4	130.0	132.8	136.0	139.4	142.6	146.0	149.1	152.3
47.5°	118.2	119.1	121.1	124.0	127.0	130.3	134.1	137.5	141.1	144.5	147.9
50°	111.7	112.3	114.8	117.8	120.8	124.5	128.5	132.1	136.0	139.7	143.5
52.5°	104.6	105.7	108.0	111.2	114.6	118.6	122.7	126.7	130.9	134.8	138.8
55°	97.3	98.5	101.0	104.2	108.1	112.0	116.5	121.0	125.5	129.7	134.1
57.5°	89.9	91.0	93.8	97.2	101.3	105.8	110.3	115.1	120.1	124.6	129.0
60°	82.1	83.3	86.3	90.1	94.3	99.0	104.1	109.2	114.5	119.4	123.8
62.5°	74.3	75.6	78.7	82.9	87.4	92.3	97.9	103.3	108.7	113.7	118.5
65°	66.4	67.8	70.8	75.2	80.2	85.6	91.4	97.1	102.7	107.9	112.7
67.5°	58.2	59.7	63.0	67.7	73.0	79.2	84.9	91.2	96.8	102.0	107.0
70°	49.7	51.9	55.2	60.0	65.9	72.2	78.6	84.6	90.5	95.9	100.8
72.5°	41.6	43.6	47.6	52.8	59.2	65.4	71.8	78.1	84.0	89.7	94.8
75°	33.8	35.5	39.7	45.7	52.3	59.1	65.3	71.6	77.7	83.3	88.6
77.5°	26.1	28.0	32.7	38.9	45.6	52.3	59.1	65.4	71.2	77.2	82.5
80°	18.4	20.6	25.6	32.2	39.1	45.9	52.6	59.0	65.2	71.0	76.2
82.5°	12.0	14.0	19.5	26.1	33.0	40.0	46.7	53.2	59.3	65.4	70.5
85°	6.3	8.7	14.2	20.8	27.6	34.7	41.4	47.9	54.3	60.0	65.3
87.5°	2.3	4.6	9.9	16.5	23.4	30.3	37.1	43.7	49.9	55.7	61.1
90°	0.1	2.5	7.5	13.8	20.6	27.4	34.2	40.7	46.9	52.6	57.9
92.5°	0.1	2.0	6.5	12.5	19.1	25.8	32.6	39.0	45.1	50.8	56.0
95°	0.1	1.6	5.7	11.4	17.8	24.4	31.1	37.4	43.4	49.1	54.3
97.5°	0.1	1.5	5.1	10.4	16.6	23.0	29.5	35.7	41.7	47.3	52.5
100°	0.0	1.4	4.7	9.6	15.4	21.6	27.9	34.1	39.9	45.4	50.5
102.5°	0.1	1.3	4.5	9.0	14.4	20.3	26.4	32.4	38.1	43.6	48.6
105°	0.1	1.2	4.4	8.6	13.6	19.1	25.0	30.8	36.3	41.6	46.5
107.5°	0.1	1.1	4.2	8.2	12.8	18.0	23.5	29.1	34.6	39.7	44.4
110°	0.1	1.1	4.0	7.9	12.2	17.0	22.2	27.5	32.7	37.7	42.3



TEST NUMBER: P34050

CATALOG NUMBER: 2BCLED-LD4-8SL-F-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.1	1.0	3.7	7.5	11.7	16.1	20.9	25.9	30.8	35.6	40.1
115°	0.0	0.9	3.5	7.2	11.2	15.4	19.9	24.5	29.1	33.7	37.9
117.5°	0.1	0.9	3.3	6.9	10.7	14.8	18.9	23.1	27.5	31.8	35.8
120°	0.1	0.8	3.1	6.5	10.3	14.2	18.0	22.0	25.9	29.9	33.8
122.5°	0.0	0.6	2.8	6.0	9.7	13.3	17.1	20.8	24.4	28.2	31.7
125°	0.1	0.5	2.6	5.6	9.2	12.7	16.3	19.8	23.1	26.5	29.8
127.5°	0.1	0.5	2.5	5.2	8.6	12.0	15.5	18.8	22.0	25.1	28.0
130°	0.1	0.4	2.3	4.8	8.0	11.3	14.6	17.7	20.8	23.7	26.4
132.5°	0.2	0.4	2.1	4.5	7.4	10.6	13.7	16.7	19.6	22.4	24.9
135°	0.1	0.3	1.8	4.0	6.7	9.7	12.7	15.6	18.3	20.9	23.3
137.5°	0.2	0.3	1.6	3.6	6.0	8.8	11.8	14.6	17.0	19.5	21.8
140°	0.2	0.3	1.3	3.2	5.3	7.8	10.6	13.3	15.8	18.1	20.2
142.5°	0.1	0.2	1.1	2.7	4.7	6.8	9.3	11.9	14.3	16.6	18.6
145°	0.1	0.2	0.8	2.3	4.0	6.0	8.1	10.4	12.7	14.9	16.9
147.5°	0.2	0.2	0.7	1.9	3.4	5.2	7.0	9.0	10.9	13.0	15.0
150°	0.1	0.1	0.5	1.5	2.9	4.4	5.9	7.6	9.4	11.1	13.0
152.5°	0.2	0.2	0.4	1.2	2.3	3.7	5.0	6.4	7.9	9.5	11.0
155°	0.1	0.1	0.3	0.8	1.7	2.9	4.1	5.3	6.5	7.7	9.1
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P34050

CATALOG NUMBER: 2BCLED-LD4-8SL-F-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	188.5	188.5	188.5	188.5	188.5	188.5	188.5	188.5
2.5°	188.8	188.7	188.9	188.8	188.7	188.7	188.7	188.5
5°	188.8	188.9	189.1	189.2	189.1	189.0	189.0	188.9
7.5°	188.8	188.9	189.2	189.4	189.3	189.3	189.3	189.4
10°	188.8	189.0	189.4	189.6	189.7	189.7	189.7	189.7
12.5°	188.1	188.6	189.1	189.4	189.6	189.7	189.6	189.6
15°	187.4	187.9	188.4	188.9	189.1	189.3	189.3	189.4
17.5°	186.3	187.0	187.7	188.2	188.5	188.8	188.8	188.8
20°	184.9	185.8	186.7	187.2	187.6	187.9	188.0	188.1
22.5°	183.3	184.3	185.2	185.9	186.5	186.7	186.9	187.0
25°	181.2	182.4	183.4	184.2	185.0	185.2	185.3	185.4
27.5°	179.0	180.3	181.4	182.2	183.0	183.4	183.7	183.7
30°	176.4	177.9	179.0	180.1	180.8	181.3	181.6	181.7
32.5°	173.6	175.0	176.5	177.5	178.4	179.0	179.4	179.3
35°	170.1	172.0	173.6	174.8	175.7	176.4	176.7	176.8
37.5°	166.8	168.6	170.4	171.6	172.7	173.5	173.8	174.1
40°	163.0	164.9	167.0	168.5	169.6	170.6	171.0	171.0
42.5°	159.2	161.5	163.4	165.1	166.5	167.5	167.9	168.2
45°	155.1	157.5	160.0	161.8	163.2	164.3	164.8	165.1
47.5°	151.0	153.8	156.3	158.4	160.0	161.2	161.8	161.8
50°	146.8	149.9	152.5	154.6	156.4	157.7	158.3	158.5
52.5°	142.4	145.7	148.4	150.8	152.5	153.9	154.7	154.9
55°	137.8	141.3	144.2	146.6	148.5	149.9	150.5	151.1
57.5°	132.9	136.7	139.6	142.1	144.1	145.6	146.4	146.7
60°	127.9	131.7	134.8	137.3	139.4	140.9	141.8	142.2
62.5°	122.6	126.4	129.8	132.5	134.5	135.9	137.0	137.3
65°	117.0	120.9	124.4	127.1	129.4	130.9	131.7	132.0
67.5°	111.2	115.5	118.7	121.5	123.8	125.6	126.3	126.7
70°	105.4	109.5	113.1	116.0	118.0	119.7	120.8	121.1
72.5°	99.2	103.6	107.1	110.0	112.3	114.0	115.0	115.3
75°	93.2	97.6	101.0	104.1	106.5	108.2	109.1	109.5
77.5°	87.1	91.5	95.2	98.1	100.5	102.3	103.3	103.7
80°	81.2	85.5	89.1	92.1	94.6	96.3	97.4	97.9
82.5°	75.3	79.8	83.3	86.5	89.0	90.6	91.9	92.1
85°	70.2	74.6	78.3	81.5	83.8	85.6	86.6	87.0
87.5°	65.8	70.0	73.8	77.0	79.4	81.2	82.2	82.5
90°	62.7	67.1	70.7	73.8	76.2	77.9	78.9	79.3
92.5°	60.8	65.1	68.8	71.9	74.2	76.0	77.0	77.3
95°	59.0	63.4	66.9	70.1	72.5	74.1	75.1	75.4
97.5°	57.2	61.5	65.0	68.0	70.4	72.1	73.1	73.5
100°	55.1	59.4	62.9	65.9	68.2	70.0	70.9	71.3
102.5°	53.0	57.2	60.7	63.6	65.9	67.6	68.6	68.9
105°	51.1	55.1	58.5	61.3	63.6	65.3	66.2	66.5
107.5°	48.7	52.7	56.1	59.0	61.2	62.8	63.7	64.0
110°	46.5	50.4	53.7	56.5	58.7	60.2	61.1	61.4



TEST NUMBER: P34050

CATALOG NUMBER: 2BCLED-LD4-8SL-F-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	44.3	47.8	51.1	53.8	55.9	57.3	58.2	58.6
115°	41.9	45.4	48.5	51.1	53.2	54.6	55.5	55.7
117.5°	39.5	43.0	46.0	48.5	50.4	51.8	52.6	52.9
120°	37.3	40.6	43.4	45.8	47.6	49.0	49.8	50.0
122.5°	35.0	38.1	40.7	43.0	44.7	45.9	46.7	47.0
125°	32.9	35.8	38.3	40.3	41.9	43.2	43.9	44.1
127.5°	30.8	33.5	35.8	37.7	39.3	40.5	41.1	41.4
130°	28.9	31.3	33.4	35.3	36.7	37.8	38.4	38.5
132.5°	27.2	29.3	31.3	32.8	34.2	35.1	35.6	35.8
135°	25.4	27.5	29.2	30.6	31.8	32.6	33.1	33.3
137.5°	23.8	25.7	27.2	28.6	29.7	30.4	30.8	30.9
140°	22.2	23.9	25.3	26.6	27.5	28.2	28.7	28.8
142.5°	20.4	22.0	23.4	24.5	25.3	26.1	26.4	26.5
145°	18.6	20.1	21.4	22.4	23.2	23.9	24.2	24.3
147.5°	16.9	18.2	19.4	20.3	21.1	21.7	22.0	22.0
150°	14.7	16.3	17.3	18.2	18.9	19.4	19.7	19.8
152.5°	12.6	14.2	15.3	16.1	16.8	17.2	17.5	17.7
155°	10.4	11.8	13.1	13.9	14.5	15.0	15.2	15.1
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)