

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: P176120

Luminaire Tested: **4BCLED-LD4-40SL-F-UNV-L840-SD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P176120
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4BCLED-LD4-40SL-F-UNV-L840-SD1-U
Description: METALUX 4FT BC LED WALL BRACKET CORRIDOR LUMINAIRE WITH A
Light Source: (112) COOPER LIGHTING 4000K LEDS
Ballast/Driver: (1) ELECTRONIC DRIVER

Summary

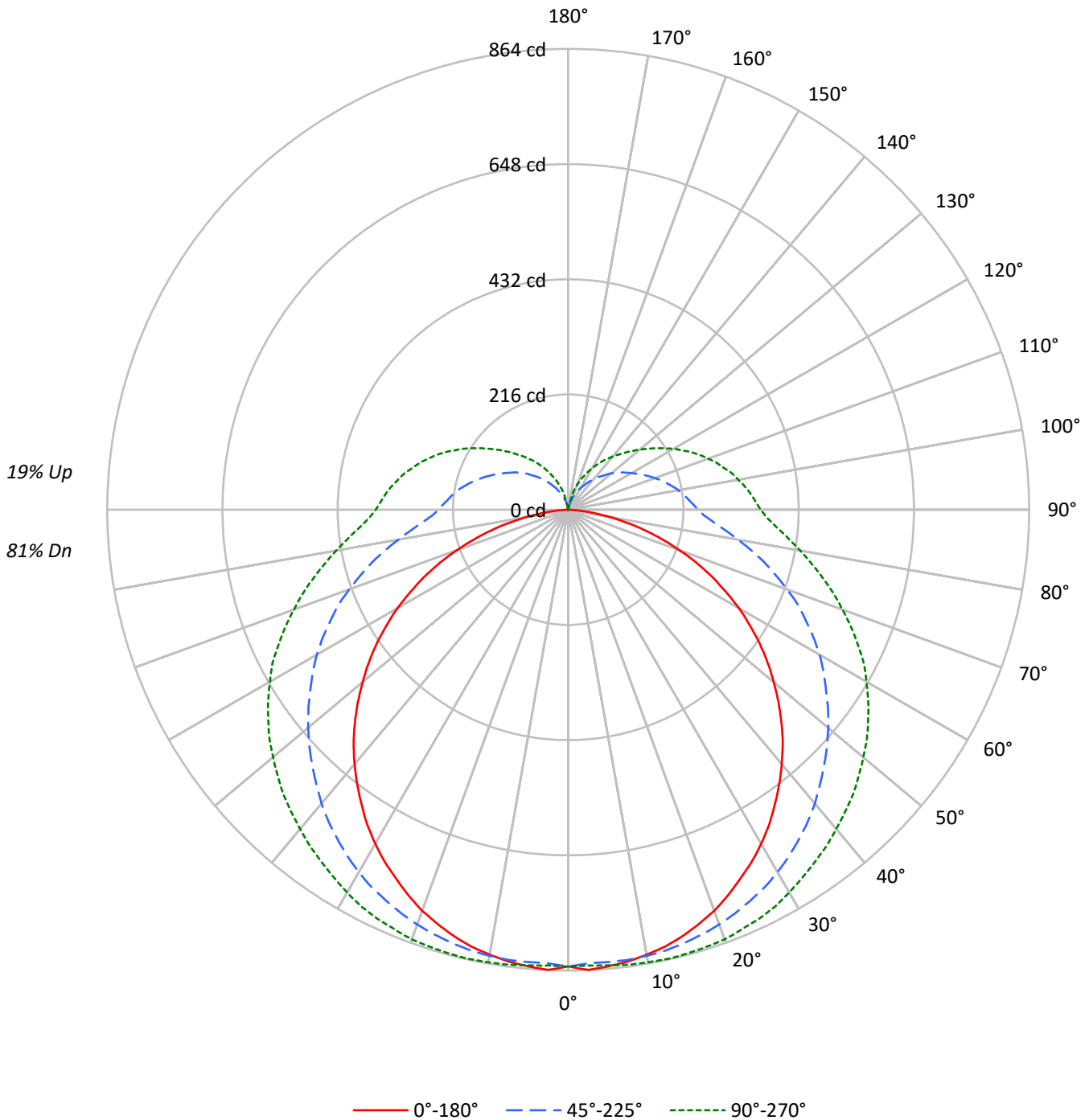
Lumens per Lamp: N/A
Luminaire Lumens: 4086.9 lumens
Efficiency: N/A
Efficacy: 91.2 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.44 / 1.51
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 4' x H: 0.25')
CIE Type: Semi-Direct

Input Watts (W): 44.8
Input Voltage (V): NR
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

TEST NUMBER: P176120

CATALOG NUMBER: 4BCLED-LD4-40SL-F-UNV-L840-SD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P176120

CATALOG NUMBER: 4BCLED-LD4-40SL-F-UNV-L840-SD1-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	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	45	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	34	60	48	39	33	44	36	31	40	34	29	37	32	27	25
7	59	45	36	29	56	43	34	29	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°	6145	6145	6145
5°	6158	5868	5836
10°	6106	5672	5617
15°	6048	5489	5430
20°	5974	5322	5269
25°	5872	5159	5111
30°	5784	5011	4958
35°	5666	4853	4815
40°	5543	4702	4695
45°	5401	4541	4597
50°	5226	4399	4493
55°	5035	4252	4398
60°	4789	4124	4299
65°	4448	3965	4188
70°	3981	3789	4053
75°	3339	3604	3925
80°	2407	3398	3816
85°	1133	3279	3758



TEST NUMBER: P176120

CATALOG NUMBER: 4BCLED-LD4-40SL-F-UNV-L840-SD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.7	2.0
10°-20°	238.8	5.8
20°-30°	373.3	9.1
30°-40°	469.5	11.5
40°-50°	518.5	12.7
50°-60°	518.2	12.7
60°-70°	467.6	11.4
70°-80°	374.9	9.2
80°-90°	273.5	6.7
90°-100°	220.9	5.4
100°-110°	183.7	4.5
110°-120°	142.3	3.5
120°-130°	101.4	2.5
130°-140°	65.6	1.6
140°-150°	37.2	0.9
150°-160°	16.4	0.4
160°-170°	3.5	0.1
170°-180°	0.0	0.0
0°-30°	693.8	17.0
0°-40°	1163.3	28.5
0°-60°	2199.9	53.8
0°-90°	3315.9	81.1
90°-120°	546.9	13.4
90°-150°	751.1	18.4
90°-180°	771.0	18.9
0°-180°	4086.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	856	856	856	856	856	
5°	860	857	851	859	857	82
15°	828	834	841	859	862	234
25°	763	783	808	838	846	352
35°	675	708	754	794	806	423
45°	566	614	678	734	755	436
55°	438	501	590	661	686	391
65°	297	378	492	571	599	293
75°	148	252	380	465	494	157
85°	24	141	274	362	393	31
90°	0	112	243	330	361	1
95°	0	98	225	313	343	0
105°	1	76	192	274	302	0
115°	1	62	155	228	255	1
125°	1	50	122	179	201	1
135°	1	36	89	136	152	1
145°	1	23	60	97	111	1
155°	1	13	35	55	70	0
165°	1	4	14	20	30	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P176120

CATALOG NUMBER: 4BCLED-LD4-40SL-F-UNV-L840-SD1-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	856.4	856.4	856.4	856.4	856.4	856.4	856.4	856.4	856.4	856.4	856.4
2.5°	863.6	862.5	859.5	858.4	859.5	859.5	858.4	856.4	854.3	851.3	851.3
5°	859.5	859.5	857.4	856.4	857.4	857.4	857.4	856.4	853.3	851.3	852.3
7.5°	854.3	854.3	852.3	852.3	853.3	854.3	854.3	854.3	852.3	851.3	852.3
10°	847.2	846.2	845.1	846.2	848.2	849.2	851.3	850.3	849.2	849.2	851.3
12.5°	839.0	836.9	836.9	838.0	841.0	843.1	845.1	845.1	845.1	846.2	849.2
15°	827.7	826.7	826.7	827.7	831.8	835.9	838.0	839.0	840.0	841.0	845.1
17.5°	814.4	814.4	814.4	816.4	821.6	825.7	828.7	831.8	832.8	834.9	841.0
20°	800.1	800.1	801.1	804.2	809.3	814.4	818.5	821.6	824.6	827.7	834.9
22.5°	782.6	783.7	784.7	788.8	794.9	801.1	806.2	810.3	814.4	818.5	825.7
25°	763.2	765.2	767.3	772.4	779.6	786.7	792.9	798.0	803.1	808.3	816.4
27.5°	744.7	744.7	748.8	755.0	762.2	771.4	778.5	784.7	790.8	798.0	806.2
30°	723.2	724.3	728.3	735.5	744.7	754.0	763.2	769.3	776.5	784.7	793.9
32.5°	700.7	701.7	706.8	714.0	724.3	735.5	744.7	751.9	761.1	770.3	779.6
35°	675.1	677.1	683.3	691.5	702.7	714.0	725.3	733.5	743.7	754.0	765.2
37.5°	649.5	652.5	658.7	666.9	680.2	693.5	703.8	714.0	725.3	737.6	748.8
40°	622.8	626.9	632.1	643.3	657.7	671.0	682.3	693.5	706.8	719.1	731.4
42.5°	595.2	598.2	605.4	617.7	632.1	646.4	658.7	672.0	685.3	698.6	712.0
45°	565.5	569.6	577.8	590.1	606.4	620.8	635.1	649.5	663.8	678.2	692.5
47.5°	534.7	539.9	548.1	562.4	578.8	595.2	609.5	625.9	641.3	657.7	673.0
50°	503.0	509.1	518.3	533.7	551.1	567.5	583.9	600.3	617.7	636.2	653.6
52.5°	471.2	476.3	487.6	504.0	522.4	539.9	557.3	575.7	595.2	613.6	632.1
55°	438.4	443.6	454.8	471.2	491.7	511.2	529.6	550.1	570.6	590.1	610.5
57.5°	403.6	408.7	423.1	440.5	461.0	481.5	502.0	525.5	547.0	567.5	588.0
60°	369.8	374.9	388.2	407.7	428.2	451.8	474.3	498.9	522.4	544.0	564.4
62.5°	332.9	340.1	355.5	373.9	398.5	421.0	445.6	471.2	494.8	518.3	539.9
65°	297.1	303.2	318.6	339.1	363.7	391.3	416.9	443.6	468.2	491.7	513.2
67.5°	260.2	267.4	283.8	305.3	332.9	360.6	387.2	413.9	441.5	466.1	485.6
70°	222.3	229.5	248.9	271.5	299.1	328.8	358.5	385.2	411.8	436.4	458.9
72.5°	184.4	192.6	211.0	237.7	268.4	298.1	327.8	357.5	383.1	407.7	430.2
75°	148.5	156.7	177.2	204.9	236.6	267.4	298.1	327.8	354.4	380.1	401.6
77.5°	112.7	122.9	142.4	173.1	206.9	237.7	268.4	298.1	325.8	351.4	374.9
80°	78.9	88.1	112.7	143.4	176.2	209.0	239.7	270.4	298.1	322.7	347.3
82.5°	49.2	59.4	85.0	116.8	148.5	181.3	213.1	243.8	271.5	297.1	321.7
85°	23.6	35.9	61.5	92.2	125.0	157.8	189.5	219.2	247.9	274.5	298.1
87.5°	7.2	18.4	44.0	74.8	106.5	139.3	170.1	200.8	228.4	255.1	278.6
90°	0.0	11.3	34.8	63.5	96.3	128.0	158.8	188.5	216.1	242.8	266.3
92.5°	0.0	8.2	29.7	58.4	89.1	120.9	151.6	180.3	208.0	234.6	258.1
95°	0.0	7.2	26.6	53.3	83.0	113.7	143.4	173.1	200.8	225.4	250.0
97.5°	0.0	7.2	24.6	49.2	77.9	107.6	137.3	166.0	192.6	218.2	241.8
100°	0.0	7.2	22.5	45.1	71.7	100.4	130.1	157.8	184.4	210.0	232.5
102.5°	0.0	7.2	21.5	42.0	67.6	95.3	121.9	149.6	176.2	200.8	223.3
105°	1.0	6.1	20.5	40.0	63.5	89.1	115.8	142.4	168.0	191.6	213.1
107.5°	0.0	6.1	20.5	38.9	60.4	84.0	108.6	134.2	158.8	182.3	203.9
110°	1.0	6.1	19.5	36.9	57.4	78.9	102.4	127.0	150.6	173.1	194.6



TEST NUMBER: P176120

CATALOG NUMBER: 4BCLED-LD4-40SL-F-UNV-L840-SD1-U

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0.0	5.1	18.4	35.9	55.3	75.8	97.3	119.9	141.4	163.9	184.4
115°	1.0	5.1	18.4	34.8	52.2	71.7	92.2	112.7	134.2	154.7	174.1
117.5°	1.0	5.1	17.4	32.8	50.2	68.6	87.1	106.5	126.0	145.5	163.9
120°	1.0	4.1	15.4	30.7	48.1	65.6	83.0	101.4	118.8	137.3	154.7
122.5°	1.0	4.1	14.3	28.7	45.1	62.5	78.9	95.3	112.7	129.1	145.5
125°	1.0	3.1	13.3	26.6	42.0	57.4	73.8	90.1	105.5	121.9	136.2
127.5°	0.0	3.1	12.3	24.6	38.9	53.3	68.6	84.0	99.4	113.7	128.0
130°	1.0	2.0	10.2	22.5	35.9	50.2	63.5	76.8	91.2	106.5	119.9
132.5°	1.0	2.0	9.2	20.5	32.8	46.1	58.4	70.7	84.0	97.3	111.7
135°	1.0	2.0	8.2	17.4	29.7	42.0	53.3	65.6	77.9	89.1	101.4
137.5°	1.0	1.0	7.2	15.4	26.6	37.9	49.2	60.4	70.7	82.0	93.2
140°	1.0	1.0	6.1	14.3	23.6	33.8	44.0	54.3	64.5	74.8	84.0
142.5°	1.0	1.0	6.1	12.3	20.5	30.7	40.0	49.2	58.4	67.6	75.8
145°	1.0	1.0	5.1	11.3	18.4	27.7	35.9	44.0	52.2	60.4	68.6
147.5°	1.0	1.0	4.1	10.2	16.4	23.6	31.8	38.9	46.1	53.3	60.4
150°	1.0	1.0	3.1	8.2	14.3	20.5	27.7	33.8	40.0	47.1	53.3
152.5°	1.0	1.0	3.1	7.2	12.3	17.4	23.6	29.7	35.9	41.0	46.1
155°	1.0	1.0	2.0	6.1	10.2	15.4	20.5	25.6	29.7	34.8	38.9
157.5°	1.0	1.0	1.0	4.1	8.2	12.3	16.4	20.5	24.6	28.7	32.8
160°	1.0	1.0	1.0	3.1	6.1	10.2	13.3	17.4	20.5	23.6	26.6
162.5°	1.0	1.0	1.0	2.0	5.1	7.2	10.2	13.3	16.4	18.4	20.5
165°	1.0	1.0	1.0	1.0	3.1	5.1	7.2	10.2	12.3	14.3	15.4
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: P176120

CATALOG NUMBER: 4BCLED-LD4-40SL-F-UNV-L840-SD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	856.4	856.4	856.4	856.4	856.4	856.4	856.4	856.4
2.5°	854.3	856.4	857.4	857.4	856.4	856.4	855.4	855.4
5°	855.4	858.4	858.4	859.5	859.5	859.5	858.4	857.4
7.5°	856.4	858.4	860.5	860.5	861.5	861.5	860.5	860.5
10°	855.4	858.4	860.5	861.5	862.5	862.5	862.5	861.5
12.5°	853.3	857.4	859.5	861.5	862.5	863.6	862.5	862.5
15°	850.3	855.4	858.4	860.5	861.5	862.5	861.5	861.5
17.5°	846.2	851.3	854.3	857.4	859.5	860.5	859.5	859.5
20°	841.0	846.2	850.3	853.3	855.4	857.4	857.4	857.4
22.5°	832.8	839.0	844.1	847.2	850.3	851.3	851.3	851.3
25°	824.6	830.8	835.9	840.0	843.1	845.1	846.2	846.2
27.5°	814.4	821.6	827.7	830.8	834.9	836.9	838.0	839.0
30°	803.1	810.3	816.4	820.5	824.6	827.7	828.7	828.7
32.5°	789.8	797.0	804.2	809.3	813.4	816.4	818.5	817.5
35°	775.5	783.7	790.8	797.0	801.1	804.2	806.2	806.2
37.5°	759.1	768.3	777.5	783.7	787.8	791.9	793.9	794.9
40°	742.7	751.9	761.1	768.3	774.4	777.5	780.6	781.6
42.5°	724.3	735.5	745.8	752.9	759.1	763.2	767.3	768.3
45°	705.8	718.1	729.4	737.6	744.7	749.9	752.9	755.0
47.5°	687.4	700.7	712.0	722.2	729.4	734.5	737.6	738.6
50°	667.9	682.3	694.5	705.8	713.0	718.1	721.2	722.2
52.5°	648.4	663.8	675.1	686.3	694.5	700.7	704.8	705.8
55°	628.0	642.3	655.6	665.9	675.1	681.2	686.3	686.3
57.5°	606.4	621.8	635.1	646.4	655.6	662.8	664.8	666.9
60°	582.9	598.2	612.6	624.9	634.1	640.2	644.3	645.4
62.5°	557.3	574.7	589.0	602.3	610.5	618.7	622.8	624.9
65°	532.7	549.1	564.4	576.7	587.0	593.1	597.2	599.3
67.5°	506.1	523.5	539.9	551.1	560.3	567.5	572.6	573.7
70°	478.4	496.8	511.2	525.5	534.7	541.9	546.0	547.0
72.5°	451.8	469.2	485.6	497.9	507.1	515.3	519.4	521.4
75°	423.1	441.5	457.9	471.2	480.4	487.6	491.7	493.8
77.5°	396.4	413.9	431.3	443.6	453.8	461.0	466.1	467.1
80°	368.8	387.2	403.6	416.9	427.2	435.4	439.5	441.5
82.5°	343.2	361.6	378.0	391.3	401.6	408.7	414.9	416.9
85°	319.6	338.1	355.5	368.8	379.0	387.2	391.3	393.4
87.5°	300.1	319.6	336.0	350.3	360.6	367.8	371.9	373.9
90°	287.9	306.3	322.7	337.0	347.3	354.4	359.6	360.6
92.5°	279.7	298.1	314.5	327.8	338.1	346.2	350.3	351.4
95°	271.5	288.9	306.3	319.6	329.9	337.0	341.1	343.2
97.5°	262.2	280.7	297.1	310.4	320.6	327.8	332.9	334.0
100°	253.0	271.5	287.9	300.1	311.4	317.6	322.7	323.7
102.5°	243.8	262.2	277.6	290.9	301.2	308.3	312.4	314.5
105°	233.6	251.0	267.4	279.7	289.9	297.1	301.2	302.2
107.5°	224.3	240.7	257.1	269.4	279.7	285.8	289.9	292.0
110°	214.1	230.5	244.8	257.1	267.4	274.5	278.6	279.7



TEST NUMBER: P176120

CATALOG NUMBER: 4BCLED-LD4-40SL-F-UNV-L840-SD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	202.8	219.2	233.6	245.9	255.1	262.2	266.3	267.4
115°	191.6	208.0	222.3	233.6	242.8	248.9	254.1	255.1
117.5°	181.3	196.7	210.0	220.2	229.5	235.6	239.7	240.7
120°	170.1	184.4	197.7	208.0	217.2	223.3	226.4	228.4
122.5°	159.8	173.1	185.4	195.7	203.9	209.0	213.1	214.1
125°	150.6	162.9	174.1	183.4	190.5	196.7	199.8	200.8
127.5°	140.3	152.6	162.9	171.1	178.2	183.4	186.4	187.5
130°	131.1	142.4	151.6	159.8	166.0	171.1	174.1	175.2
132.5°	122.9	133.2	142.4	149.6	154.7	158.8	161.9	162.9
135°	113.7	124.0	132.1	139.3	144.4	147.5	150.6	151.6
137.5°	103.5	115.8	122.9	129.1	134.2	137.3	139.3	140.3
140°	94.2	104.5	113.7	119.9	124.0	127.0	129.1	130.1
142.5°	85.0	94.2	104.5	110.6	113.7	117.8	118.8	119.9
145°	76.8	85.0	93.2	101.4	105.5	107.6	108.6	110.6
147.5°	67.6	74.8	83.0	91.2	95.3	98.3	99.4	99.4
150°	59.4	65.6	72.7	79.9	86.0	88.1	89.1	90.1
152.5°	51.2	57.4	62.5	68.6	75.8	78.9	79.9	79.9
155°	44.0	48.1	53.3	57.4	64.5	68.6	69.7	69.7
157.5°	35.9	40.0	44.0	48.1	52.2	58.4	59.4	60.4
160°	28.7	32.8	34.8	38.9	42.0	47.1	50.2	50.2
162.5°	22.5	24.6	26.6	29.7	31.8	35.9	40.0	41.0
165°	16.4	17.4	19.5	21.5	22.5	24.6	29.7	29.7
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)