

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: P33957

Luminaire Tested: **4BCLED-LD4-28SL-F-UNV-L835-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P33957
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4BCLED-LD4-28SL-F-UNV-L835-CD1-U
Description: METALUX 4FT BC LED WALL BRACKET CORRIDOR LUMINAIRE WITH A
Light Source: (112) COOPER LIGHTING 3500K LEDS
Ballast/Driver: (1) ELECTRONIC DRIVER

Summary

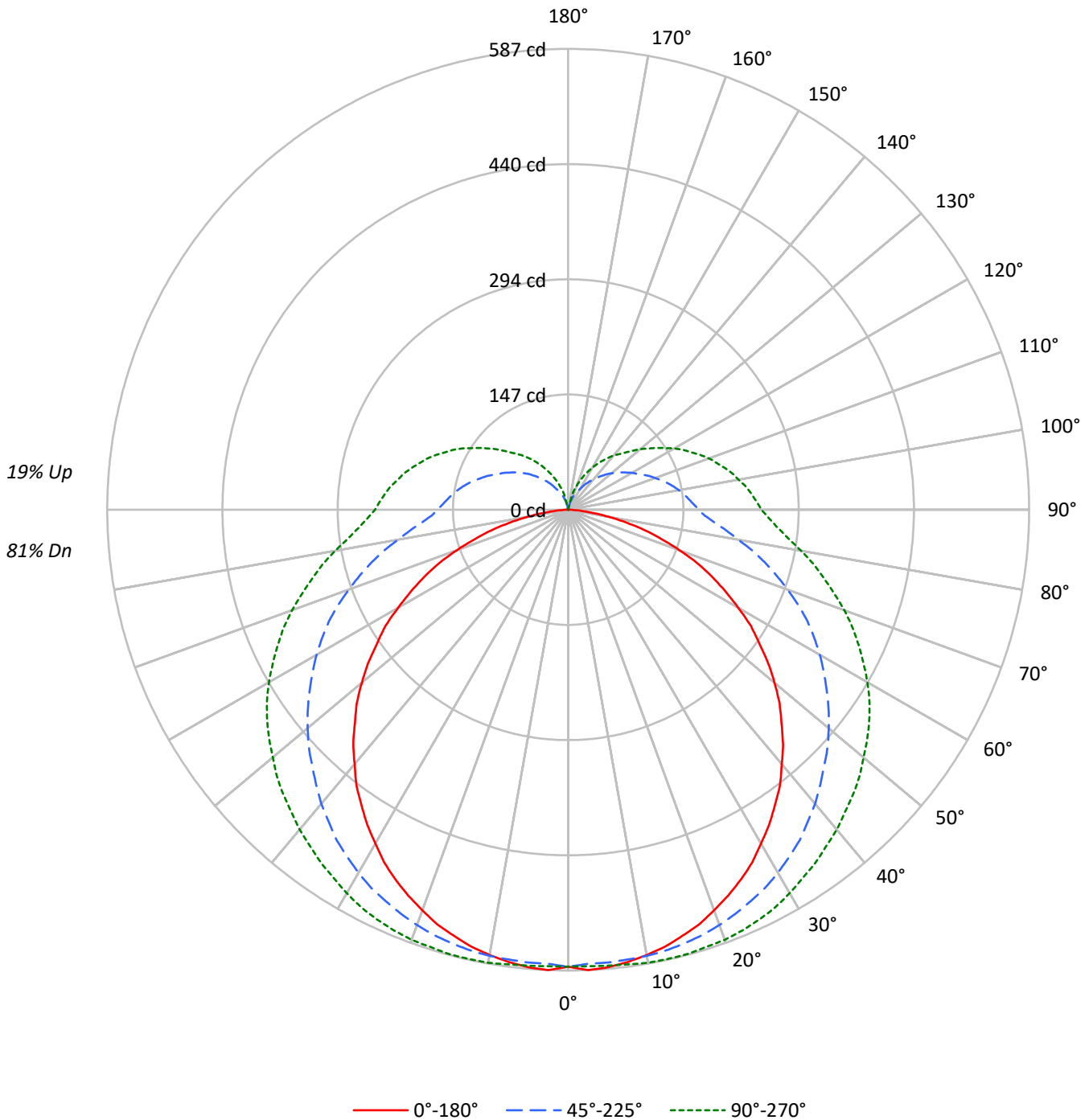
Lumens per Lamp: N/A
Luminaire Lumens: 2783.9 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.44 / 1.51
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 29.5
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

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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	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	47	44	40
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	38	34	41	36	31	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	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°	4176	4176	4176
5°	4195	4020	4005
10°	4159	3908	3889
15°	4118	3811	3789
20°	4069	3718	3703
25°	4020	3628	3622
30°	3950	3545	3538
35°	3879	3461	3462
40°	3797	3367	3399
45°	3704	3272	3347
50°	3605	3197	3298
55°	3458	3117	3265
60°	3291	3044	3218
65°	3085	2969	3161
70°	2772	2858	3106
75°	2345	2758	3040
80°	1691	2645	2997
85°	826	2605	3002



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.5	2.0
10°-20°	162.4	5.8
20°-30°	254.0	9.1
30°-40°	319.4	11.5
40°-50°	352.9	12.7
50°-60°	352.8	12.7
60°-70°	318.4	11.4
70°-80°	255.6	9.2
80°-90°	186.8	6.7
90°-100°	150.9	5.4
100°-110°	125.3	4.5
110°-120°	97.1	3.5
120°-130°	69.3	2.5
130°-140°	44.8	1.6
140°-150°	25.4	0.9
150°-160°	11.1	0.4
160°-170°	2.4	0.1
170°-180°	0.0	0.0
0°-30°	471.9	17.0
0°-40°	791.3	28.4
0°-60°	1497.0	53.8
0°-90°	2257.8	81.1
90°-120°	373.3	13.4
90°-150°	512.7	18.4
90°-180°	526.0	18.9
0°-180°	2783.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	582	582	582	582	582	
5°	585	583	579	584	583	56
15°	562	567	572	584	586	159
25°	520	533	550	570	576	240
35°	459	482	514	540	549	287
45°	384	418	461	499	513	297
55°	297	342	402	450	468	266
65°	202	257	336	389	408	200
75°	101	172	259	316	337	106
85°	16	97	187	247	268	21
90°	0	77	166	225	246	1
95°	0	68	154	213	234	0
105°	0	52	131	186	206	0
115°	0	42	105	155	173	0
125°	0	34	83	122	137	0
135°	0	24	61	93	103	0
145°	0	16	41	66	76	0
155°	1	8	23	36	48	0
165°	1	3	10	14	21	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	582	582	582	582	582	582	582	582	582	582	582
2.5°	587	586	585	584	585	585	584	582	581	579	579
5°	585	584	583	582	583	583	582	582	580	579	580
7.5°	581	581	580	579	580	581	581	580	579	578	579
10°	576	576	575	575	577	578	578	578	578	577	579
12.5°	570	570	569	570	572	573	574	574	575	575	577
15°	562	563	562	563	566	568	570	570	571	572	575
17.5°	554	554	554	556	559	561	564	565	566	568	572
20°	543	544	545	547	550	553	556	558	561	563	567
22.5°	532	532	534	537	541	545	548	551	554	557	562
25°	520	521	523	526	531	535	539	543	546	550	556
27.5°	507	507	509	513	519	524	529	533	538	543	548
30°	491	493	496	500	507	513	518	523	528	534	540
32.5°	476	477	480	486	492	500	506	512	517	524	531
35°	459	461	465	471	478	485	493	500	507	514	521
37.5°	443	444	448	455	463	472	479	486	493	501	509
40°	423	426	431	438	447	456	464	472	481	489	497
42.5°	405	406	412	420	430	439	448	457	466	475	484
45°	384	387	393	402	412	423	432	442	452	461	471
47.5°	365	367	374	383	394	405	415	426	438	448	458
50°	343	346	353	363	375	387	398	409	421	433	444
52.5°	321	324	332	342	355	367	379	392	405	418	430
55°	297	301	309	321	335	348	361	375	389	402	415
57.5°	276	279	287	299	314	328	342	357	372	386	400
60°	250	255	265	278	292	308	323	339	355	370	384
62.5°	226	231	240	255	270	286	303	321	338	353	367
65°	202	206	217	232	248	266	284	302	319	336	350
67.5°	178	182	193	208	226	245	264	283	300	317	331
70°	151	157	169	185	204	224	244	263	281	297	312
72.5°	125	132	145	162	182	203	223	243	262	278	294
75°	101	107	120	140	161	183	203	223	241	259	274
77.5°	76	83	98	119	141	163	183	203	222	240	255
80°	53	61	78	98	120	143	164	184	203	220	236
82.5°	32	41	58	80	102	124	146	166	185	203	219
85°	16	25	42	64	86	108	130	150	170	187	204
87.5°	4	13	30	51	74	96	117	137	156	174	190
90°	0	8	24	44	66	88	109	129	148	166	182
92.5°	0	6	21	40	61	82	104	124	142	160	176
95°	0	5	18	37	57	78	98	118	137	154	170
97.5°	0	5	17	33	53	73	94	113	132	149	165
100°	0	5	16	31	49	69	89	108	126	143	159
102.5°	0	5	15	29	46	65	84	102	120	137	152
105°	0	4	15	28	44	61	79	97	114	131	146
107.5°	0	4	14	27	41	58	75	92	109	124	139
110°	0	4	13	26	39	55	70	87	103	118	133



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0	4	13	25	38	52	66	82	97	112	126
115°	0	4	12	24	36	49	63	77	92	105	119
117.5°	0	3	11	23	35	47	60	73	86	99	112
120°	0	3	11	21	33	45	57	69	82	94	105
122.5°	0	3	10	20	31	42	54	66	77	88	99
125°	0	2	9	18	29	40	51	62	73	83	93
127.5°	0	2	8	16	26	36	47	57	68	78	87
130°	0	2	7	15	24	34	43	53	62	72	82
132.5°	0	1	7	14	22	31	40	49	58	67	76
135°	0	1	6	12	20	28	36	45	53	61	69
137.5°	0	1	5	11	18	25	33	41	48	56	63
140°	0	1	5	10	16	23	30	37	44	51	57
142.5°	0	1	4	9	14	20	27	33	39	46	52
145°	0	1	4	8	13	18	24	29	35	41	46
147.5°	0	1	3	7	11	17	21	26	31	36	41
150°	1	1	2	6	10	14	19	23	27	31	36
152.5°	1	1	2	5	8	12	17	20	24	27	31
155°	1	1	2	4	7	10	14	17	21	23	26
157.5°	1	1	1	3	6	9	12	15	17	20	22
160°	1	1	1	2	5	7	9	12	14	17	18
162.5°	1	1	1	2	3	5	7	9	11	13	15
165°	1	1	1	1	2	4	5	7	8	10	11
167.5°	0	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	582	582	582	582	582	582	582	582
2.5°	581	582	583	583	583	582	581	582
5°	582	583	584	584	584	584	583	583
7.5°	582	583	585	585	585	585	585	584
10°	581	584	585	586	586	586	586	586
12.5°	581	583	585	586	586	587	587	586
15°	579	581	583	585	586	586	586	586
17.5°	576	579	581	583	585	585	585	584
20°	571	575	578	580	582	583	583	583
22.5°	567	571	575	577	578	579	580	580
25°	561	565	569	572	574	575	575	576
27.5°	554	559	563	566	568	570	570	571
30°	546	551	555	559	562	563	564	564
32.5°	537	543	547	551	554	555	557	556
35°	527	533	539	542	545	547	548	549
37.5°	517	524	529	533	536	539	540	540
40°	505	512	518	523	527	530	531	532
42.5°	493	501	508	513	517	520	522	522
45°	480	489	496	502	507	511	513	513
47.5°	468	477	485	491	496	500	502	503
50°	455	465	473	480	485	489	491	491
52.5°	442	452	460	467	473	477	479	480
55°	428	438	447	454	460	464	467	468
57.5°	413	424	433	441	447	451	454	455
60°	397	407	417	426	432	436	438	440
62.5°	380	392	401	410	416	421	423	424
65°	363	374	385	393	399	405	407	408
67.5°	345	357	367	375	383	388	390	392
70°	326	339	349	358	365	369	372	374
72.5°	307	320	330	340	347	351	354	355
75°	288	301	312	321	328	333	336	337
77.5°	270	283	294	302	309	315	317	320
80°	251	264	275	284	292	297	299	301
82.5°	234	247	258	267	275	279	283	283
85°	218	231	242	252	259	264	267	268
87.5°	205	218	229	239	246	252	254	256
90°	196	209	220	230	237	242	245	246
92.5°	191	203	215	224	231	236	239	240
95°	185	198	209	217	225	230	233	234
97.5°	179	192	203	212	219	224	227	228
100°	173	185	196	205	212	217	220	220
102.5°	166	178	189	198	205	210	213	214
105°	159	171	182	191	198	202	205	206
107.5°	153	164	175	183	190	195	198	198
110°	145	157	167	176	182	187	190	191



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	138	149	159	167	174	178	181	182
115°	131	142	151	159	165	170	173	173
117.5°	123	134	143	151	156	161	164	165
120°	116	126	135	142	148	152	154	156
122.5°	109	119	127	133	139	143	145	146
125°	103	111	119	125	130	134	137	137
127.5°	96	104	111	117	122	125	127	128
130°	90	98	104	109	113	117	119	120
132.5°	84	91	97	102	106	109	110	111
135°	78	85	91	95	98	101	103	103
137.5°	70	78	85	89	92	94	96	96
140°	64	71	78	83	85	88	89	90
142.5°	58	64	71	76	79	81	82	83
145°	52	57	63	69	72	74	75	76
147.5°	46	51	56	61	66	67	68	69
150°	40	44	49	53	59	61	61	62
152.5°	34	38	42	46	50	53	54	55
155°	29	32	35	38	42	47	47	48
157.5°	24	26	29	32	34	39	40	41
160°	20	21	23	25	28	31	34	34
162.5°	16	17	18	20	21	23	27	27
165°	12	12	13	14	15	17	19	21
167.5°	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0

(END OF REPORT)