

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: P33961

Luminaire Tested: **4BCLED-LD4-20SL-F-UNV-L835-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P33961
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4BCLED-LD4-20SL-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) OSRAM ELECTRONIC DRIVER

Summary

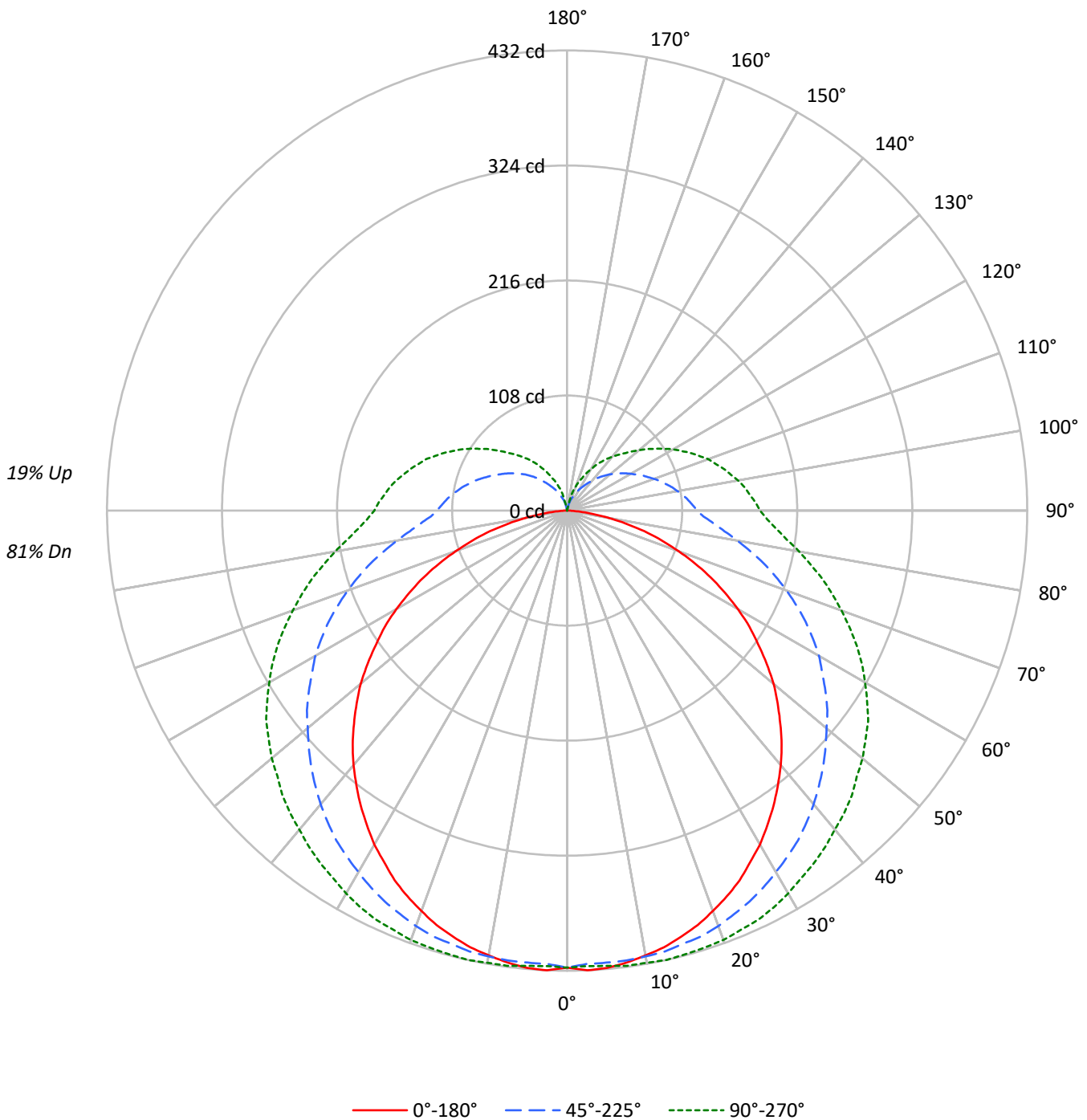
Lumens per Lamp: N/A
Luminaire Lumens: 2048.5 lumens
Efficiency: N/A
Efficacy: 94.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.44 / 1.51
Luminous Opening: Rectangular w/ Sides (W: 0.38' x L: 4' x H: 0.21')
CIE Type: Semi-Direct

Input Watts (W): 21.8
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	48	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°	3078	3078	3078
5°	3091	2957	2947
10°	3061	2879	2860
15°	3033	2805	2787
20°	2998	2741	2725
25°	2961	2671	2666
30°	2912	2603	2604
35°	2857	2546	2548
40°	2800	2479	2498
45°	2730	2413	2466
50°	2659	2348	2431
55°	2550	2295	2407
60°	2435	2246	2362
65°	2276	2183	2325
70°	2037	2107	2276
75°	1741	2034	2237
80°	1276	1948	2200
85°	619	1922	2207



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	40.9	2.0
10°-20°	119.6	5.8
20°-30°	186.9	9.1
30°-40°	235.1	11.5
40°-50°	259.7	12.7
50°-60°	259.6	12.7
60°-70°	234.4	11.4
70°-80°	188.0	9.2
80°-90°	137.3	6.7
90°-100°	111.0	5.4
100°-110°	92.3	4.5
110°-120°	71.5	3.5
120°-130°	50.9	2.5
130°-140°	33.0	1.6
140°-150°	18.5	0.9
150°-160°	8.0	0.4
160°-170°	1.7	0.1
170°-180°	0.0	0.0
0°-30°	347.4	17.0
0°-40°	582.5	28.4
0°-60°	1101.7	53.8
0°-90°	1661.5	81.1
90°-120°	274.8	13.4
90°-150°	377.3	18.4
90°-180°	387.0	18.9
0°-180°	2048.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	429	429	429	429	429	
5°	431	429	426	430	429	41
15°	414	418	421	430	431	117
25°	383	392	405	420	424	176
35°	338	355	378	398	404	211
45°	283	307	340	368	378	218
55°	219	251	296	332	345	196
65°	149	189	247	286	300	147
75°	75	127	191	232	248	79
85°	12	71	138	182	197	16
90°	0	56	122	166	181	1
95°	0	50	114	157	172	0
105°	0	38	96	138	152	0
115°	0	32	78	114	128	0
125°	0	24	61	90	101	0
135°	0	18	45	68	76	0
145°	0	11	29	48	56	0
155°	0	6	17	27	34	0
165°	0	2	7	10	15	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°	429	429	429	429	429	429	429	429	429	429	429
2.5°	432	431	431	430	430	430	430	429	428	426	427
5°	431	430	429	429	429	429	429	429	427	426	427
7.5°	428	428	427	427	427	428	428	428	427	426	427
10°	424	424	423	423	425	425	426	426	425	425	426
12.5°	420	420	420	420	422	423	424	424	424	424	425
15°	414	414	414	415	417	418	420	421	421	421	424
17.5°	408	407	408	409	411	413	415	416	417	419	421
20°	400	400	401	403	405	407	410	412	413	415	418
22.5°	392	392	393	395	398	401	404	406	407	410	413
25°	383	383	384	386	390	394	397	399	402	405	409
27.5°	372	373	375	378	382	386	390	393	395	399	403
30°	362	363	365	368	373	377	382	385	389	392	397
32.5°	350	351	354	358	363	368	373	377	381	385	390
35°	338	340	342	347	352	358	363	368	373	378	383
37.5°	325	326	330	335	341	348	353	358	363	369	375
40°	312	313	317	322	329	336	342	347	354	360	366
42.5°	298	299	303	310	317	324	330	337	344	350	357
45°	283	285	289	296	303	311	318	325	332	340	347
47.5°	268	270	274	282	290	298	306	313	321	329	337
50°	253	254	260	267	276	284	293	301	310	318	327
52.5°	236	238	244	252	261	270	279	289	298	308	316
55°	219	222	228	236	246	256	266	276	286	296	306
57.5°	203	205	211	221	231	241	252	263	274	284	294
60°	185	188	195	204	215	226	238	250	262	273	283
62.5°	167	170	177	188	199	211	224	236	248	260	271
65°	149	152	160	171	182	196	209	222	235	247	258
67.5°	130	134	142	153	166	180	194	208	221	233	244
70°	111	115	123	136	150	165	180	193	206	219	230
72.5°	93	97	106	119	134	149	165	179	192	205	216
75°	75	78	89	103	119	135	150	165	177	191	202
77.5°	56	61	72	87	103	119	135	150	163	176	188
80°	40	45	57	72	88	105	120	135	149	162	174
82.5°	24	30	43	58	75	91	108	122	136	149	161
85°	12	18	31	47	63	79	95	110	124	138	150
87.5°	4	9	22	37	54	70	86	101	115	128	140
90°	0	5	17	32	48	64	80	95	109	122	134
92.5°	0	4	15	29	45	61	76	91	105	118	130
95°	0	4	13	27	42	57	72	87	101	114	126
97.5°	0	4	12	25	39	54	69	83	97	110	121
100°	0	3	11	23	36	51	65	79	93	105	117
102.5°	0	3	11	21	34	48	62	75	89	101	112
105°	0	3	11	20	32	45	58	72	84	96	107
107.5°	0	3	10	20	30	42	55	68	80	92	103
110°	0	3	10	19	29	40	52	64	76	87	98



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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	0	3	9	18	28	38	49	60	71	82	92
115°	0	3	9	17	27	36	46	57	67	78	88
117.5°	0	2	8	16	26	35	44	54	64	73	82
120°	0	2	8	15	24	33	42	51	60	69	78
122.5°	0	2	7	14	22	31	40	48	57	65	73
125°	0	2	7	13	20	29	37	45	53	61	68
127.5°	0	1	6	12	19	26	35	42	50	57	65
130°	0	1	5	11	17	24	32	39	46	53	60
132.5°	0	1	5	10	16	22	29	36	43	49	56
135°	0	1	4	9	15	20	26	33	39	45	51
137.5°	0	1	4	8	13	19	24	29	35	41	47
140°	0	1	3	7	12	17	22	26	32	37	42
142.5°	0	0	3	6	11	15	20	24	28	33	38
145°	0	0	3	6	9	13	18	21	25	29	34
147.5°	0	0	2	5	8	12	16	19	22	26	29
150°	0	0	2	4	7	11	14	17	20	23	26
152.5°	0	0	1	4	6	9	12	15	17	20	22
155°	0	0	1	3	5	8	10	13	15	17	19
157.5°	0	0	1	2	4	6	9	11	13	14	16
160°	0	0	0	2	3	5	7	9	10	12	13
162.5°	0	0	0	1	2	4	5	7	8	10	11
165°	0	0	0	1	2	3	4	5	6	7	8
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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CATALOG NUMBER: 4BCLED-LD4-20SL-F-UNV-L835-CD1-U

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	429	429	429	429	429	429	429	429
2.5°	428	429	429	429	429	429	428	428
5°	428	429	429	430	430	430	429	429
7.5°	429	430	431	431	431	431	431	431
10°	428	430	430	431	431	432	431	431
12.5°	428	429	430	431	432	432	432	432
15°	426	428	430	430	431	432	432	431
17.5°	424	426	428	429	430	431	431	430
20°	421	424	426	428	428	429	429	429
22.5°	417	420	423	424	426	426	427	426
25°	413	416	419	421	422	423	424	424
27.5°	408	411	414	416	418	419	420	420
30°	402	405	409	411	413	414	415	415
32.5°	395	399	403	405	407	408	410	409
35°	388	392	396	399	401	403	403	404
37.5°	380	385	389	392	395	396	397	398
40°	372	376	381	385	387	390	391	391
42.5°	363	368	373	377	380	382	384	385
45°	353	360	366	369	373	376	377	378
47.5°	345	351	357	362	365	368	370	369
50°	335	342	348	353	357	359	361	362
52.5°	325	332	339	344	348	351	353	353
55°	315	322	329	335	339	342	344	345
57.5°	303	311	318	324	328	331	333	334
60°	292	300	307	313	317	321	323	323
62.5°	280	288	296	302	306	310	312	312
65°	267	276	283	289	294	297	300	300
67.5°	254	262	270	277	281	285	287	287
70°	240	249	257	264	268	272	274	274
72.5°	226	235	243	250	255	258	261	261
75°	212	221	229	236	241	245	247	248
77.5°	199	208	216	222	227	232	234	234
80°	185	194	202	209	214	218	220	221
82.5°	172	181	190	197	202	206	208	208
85°	161	170	178	185	191	194	196	197
87.5°	151	161	169	176	181	185	187	188
90°	145	154	162	169	174	178	180	181
92.5°	140	150	158	165	170	174	176	177
95°	136	146	154	160	166	170	172	172
97.5°	132	141	149	156	161	165	167	168
100°	127	136	144	151	156	160	162	163
102.5°	123	132	139	146	151	155	157	157
105°	117	126	134	141	146	149	152	152
107.5°	112	121	129	135	140	144	146	146
110°	107	116	123	129	134	138	140	141



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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	102	110	117	123	128	131	133	134
115°	96	104	111	117	122	125	127	128
117.5°	91	99	105	111	115	119	121	121
120°	86	93	99	105	109	112	114	115
122.5°	80	87	93	98	102	105	107	108
125°	76	82	87	92	96	99	101	101
127.5°	71	77	82	86	90	92	94	95
130°	66	72	77	81	84	86	88	88
132.5°	62	67	72	75	78	80	81	82
135°	57	63	67	70	73	74	76	76
137.5°	52	58	63	66	68	69	71	71
140°	47	53	58	61	63	65	65	66
142.5°	43	47	52	56	58	60	61	61
145°	38	42	46	51	53	55	55	56
147.5°	33	37	41	45	48	49	50	51
150°	29	32	35	39	43	44	45	45
152.5°	25	27	30	33	37	39	40	40
155°	21	23	26	28	31	34	34	34
157.5°	18	20	21	23	25	28	29	30
160°	14	16	17	19	20	23	25	25
162.5°	11	12	13	14	16	17	20	20
165°	9	9	10	11	11	12	14	15
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)