

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: FAIL-SAFE

Report Number: G1-1710-337-2

Luminaire Tested: **B95-PP-BLK-LD4-12W-40-CL-120-EDC1**

Test Date: 11/07/17



Test Information

Test Method: LM-79-08
Report Number: G1-1710-337-2
Test Lab: INNOVATION CENTER(G1)
Test Date: 11/07/17
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: B95-PP-BLK-LD4-12W-40-CL-120-EDC1
Description: VR 2000 BRICK LED WITH CLEAR LENS & PAINTED PERIMETER FLAT BLACK.
Light Source: (56) NICHIA 4000K LEDS
1FS402256M8404
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER @ 240mA
OT25UNVDIM1F0325

Summary

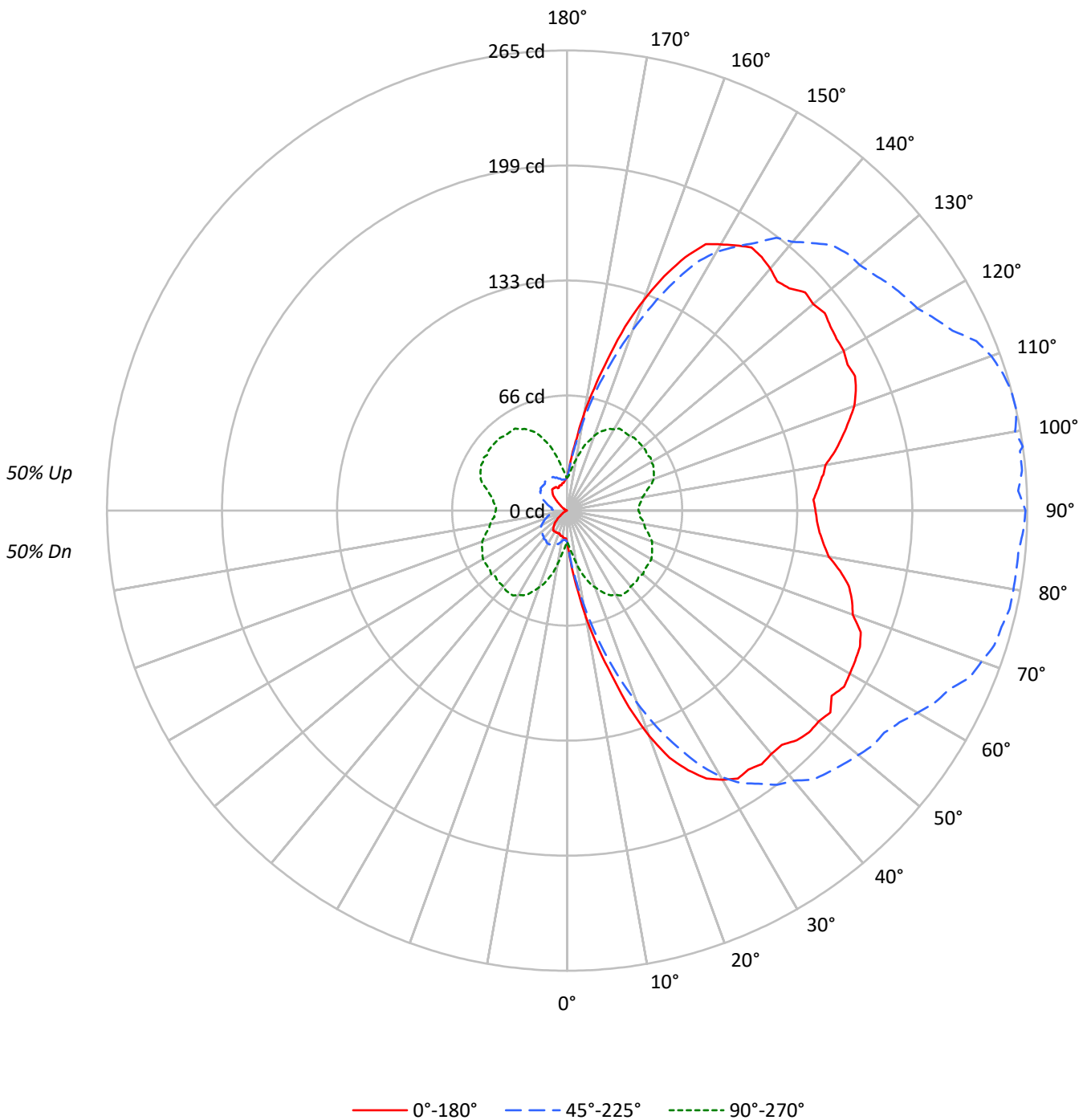
Lumens per Lamp: N/A
Luminaire Lumens: 1169.4 lumens
Efficiency: N/A
Efficacy: 99.9 lumens/watt
Spacing Criteria (0/90/45): 3.89 / 3.09 / 4.17
Luminous Opening: Rectangular w/ Sides (W: 0.35' x L: 0.29' x H: 0.67')
CIE Type: General Diffuse

Input Watts (W): 11.7
Input Voltage (V): 120.0
Input Current (A_{in}): 0.0984
Voltage Rise (V): NR
Power Factor: 0.9943
Total Harmonic Distortion (THDi): 6.53%
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 7.0 HR
Ambient Temperature (°C): 25.4
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	107	107	107	107	99	99	99	99	83	83	83		69	69	69		56	56	56	50
1	93	87	81	76	85	80	75	70	66	63	59		54	51	48		43	40	38	33
2	83	73	65	59	76	67	60	54	56	50	45		45	41	37		35	32	29	24
3	75	63	54	47	68	58	50	43	47	41	36		38	33	29		29	26	23	18
4	68	55	45	38	61	50	42	35	41	35	29		33	28	24		25	21	18	14
5	62	48	39	32	56	44	36	29	36	30	24		29	24	20		22	18	15	12
6	56	43	33	27	51	39	31	25	32	26	21		26	21	17		20	16	13	9
7	52	38	29	23	47	35	27	21	29	22	18		23	18	14		18	14	11	8
8	48	34	26	20	44	31	24	18	26	20	15		21	16	12		16	12	9	7
9	44	31	23	17	40	28	21	16	24	18	13		19	14	11		15	11	8	6
10	41	28	20	15	38	26	19	14	22	16	12		17	13	9		14	10	7	5

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	1876	1876	1876
5°	2964	2066	1395
10°	4676	2463	1131
15°	6490	2868	1004
20°	8353	3093	847
25°	9183	3245	779
30°	9285	3229	726
35°	8903	3183	685
40°	8531	3006	559
45°	8387	2914	448
50°	8227	2849	305
55°	7924	2758	170
60°	7901	2739	126
65°	7771	2643	42
70°	7324	2567	0
75°	7097	2408	0
80°	6575	2313	0
85°	6435	2230	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	2.7	0.2
10°-20°	14.7	1.3
20°-30°	36.3	3.1
30°-40°	58.4	5.0
40°-50°	75.5	6.5
50°-60°	89.8	7.7
60°-70°	99.8	8.5
70°-80°	104.1	8.9
80°-90°	103.9	8.9
90°-100°	104.3	8.9
100°-110°	105.3	9.0
110°-120°	100.7	8.6
120°-130°	89.2	7.6
130°-140°	74.9	6.4
140°-150°	57.9	5.0
150°-160°	35.4	3.0
160°-170°	14.0	1.2
170°-180°	2.6	0.2
0°-30°	53.7	4.6
0°-40°	112.1	9.6
0°-60°	277.4	23.7
0°-90°	585.1	50.0
90°-120°	310.3	26.5
90°-150°	532.4	45.5
90°-180°	584.0	49.9
0°-180°	1169.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	18	18	18	18	18	
5°	34	32	23	17	16	4
15°	97	86	40	20	15	29
25°	165	150	53	21	14	76
35°	182	192	58	21	14	115
45°	187	213	57	20	10	144
55°	186	223	56	18	4	169
65°	186	243	54	15	1	183
75°	168	259	48	11	0	176
85°	146	261	42	8	0	121
90°	143	264	41	8	0	78
95°	145	263	42	9	0	120
105°	164	265	48	11	0	173
115°	183	245	55	16	1	180
125°	185	227	56	19	4	166
135°	181	216	57	20	10	141
145°	185	188	56	21	15	115
155°	161	145	51	21	15	74
165°	90	79	39	19	15	27
175°	32	30	23	18	17	4
180°	19	19	19	19	19	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	18	18	18	18	18	18	18	18	18	18	18
2.5°	24	24	24	24	24	23	23	22	21	20	20
5°	34	34	33	33	32	32	30	28	26	24	23
7.5°	46	47	46	45	44	42	39	35	32	28	26
10°	62	61	61	60	59	55	50	44	38	33	31
12.5°	79	80	79	78	75	70	62	54	45	39	36
15°	97	97	98	96	94	86	75	64	53	44	40
17.5°	119	116	115	116	112	102	90	76	60	49	44
20°	138	135	136	133	130	118	103	84	67	53	47
22.5°	154	152	154	153	147	135	115	94	73	57	50
25°	165	165	168	166	164	150	128	102	79	60	53
27.5°	174	174	178	180	179	165	138	110	84	63	55
30°	179	180	189	193	192	177	147	118	89	65	56
32.5°	183	184	193	201	203	186	157	122	91	66	58
35°	182	186	195	206	213	192	164	124	93	67	58
37.5°	184	187	197	214	219	199	166	126	94	66	58
40°	183	188	198	217	224	203	169	127	96	66	57
42.5°	183	189	201	218	230	210	170	130	96	66	57
45°	187	189	202	223	239	213	172	133	96	66	57
47.5°	189	191	203	227	241	216	175	135	97	66	56
50°	189	194	204	232	247	219	179	137	97	66	57
52.5°	191	196	207	232	248	222	181	138	99	67	56
55°	186	197	212	238	251	223	187	141	100	66	56
57.5°	189	196	214	241	251	227	189	140	101	66	56
60°	188	193	217	242	254	233	190	144	100	65	56
62.5°	187	192	217	242	253	239	195	144	100	64	55
65°	186	190	219	241	255	243	199	145	98	63	54
67.5°	183	187	219	240	259	251	202	145	97	62	53
70°	175	184	214	241	265	254	201	143	94	60	52
72.5°	172	182	211	243	267	258	203	144	93	59	50
75°	168	177	209	245	268	259	204	143	89	57	48
77.5°	161	170	205	248	271	261	202	139	87	55	46
80°	153	162	201	251	272	261	199	137	86	54	45
82.5°	149	156	201	254	273	261	198	134	83	53	44
85°	146	153	202	253	271	261	199	134	82	51	42
87.5°	144	153	202	253	275	263	197	131	82	50	42
90°	143	152	200	253	275	264	197	133	80	50	41
92.5°	142	151	203	254	276	260	199	134	82	50	41
95°	145	153	199	256	275	263	200	134	83	51	42
97.5°	148	157	201	252	277	263	201	137	83	52	43
98°	149	158	200	255	279	265	200	137	84	52	43
100°	151	163	203	250	278	262	201	139	86	53	44
102.5°	158	169	208	251	278	265	203	141	89	55	46
105°	164	173	212	245	275	265	205	144	90	58	48
107.5°	170	178	215	247	274	263	206	145	94	60	51



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	176	181	218	246	268	260	205	147	97	62	53
112.5°	180	185	219	245	264	255	203	147	99	64	54
115°	183	186	218	244	262	245	199	147	100	65	55
117.5°	182	187	215	244	260	239	198	145	101	66	56
120°	184	190	211	242	257	233	194	144	101	67	56
122.5°	184	190	207	238	258	230	191	141	100	67	57
125°	185	188	205	236	251	227	187	139	98	66	56
127.5°	187	187	199	236	251	223	181	137	96	67	57
130°	185	185	203	228	244	220	175	135	97	66	57
132.5°	186	187	202	227	243	219	172	133	95	66	57
135°	181	184	202	224	236	216	167	130	94	66	57
137.5°	179	185	200	221	231	209	166	128	96	66	57
140°	182	185	199	220	225	202	167	124	93	66	56
142.5°	184	188	198	215	219	198	165	122	92	66	56
145°	185	186	200	208	214	188	160	122	90	65	56
147.5°	181	184	198	198	202	180	153	119	89	64	56
150°	177	181	187	189	192	172	143	114	86	63	54
152.5°	173	173	176	178	176	161	133	106	82	61	53
155°	161	162	164	164	158	145	123	98	76	58	51
157.5°	146	147	149	147	140	128	112	90	71	55	49
160°	129	129	128	128	123	111	97	81	64	51	46
162.5°	111	110	109	109	105	95	84	70	58	47	42
165°	90	91	90	91	87	79	70	60	50	42	39
167.5°	72	73	72	73	71	65	58	51	43	37	34
170°	57	57	57	56	55	51	47	42	36	32	30
172.5°	42	43	42	42	42	39	37	34	31	27	26
175°	32	32	32	31	31	30	28	27	25	23	23
177.5°	24	24	23	23	23	23	22	22	21	20	20
180°	19	19	19	19	19	19	19	19	19	19	19



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	18	18	18	18	18	18	18	18	18	18
2.5°	19	19	18	18	17	17	17	16	16	16
5°	22	21	19	18	17	17	16	16	16	16
7.5°	25	23	21	19	17	16	16	16	16	16
10°	29	26	23	20	18	16	15	15	15	15
12.5°	33	29	25	22	19	16	15	15	15	15
15°	37	32	27	24	20	17	15	15	14	15
17.5°	40	35	29	25	20	17	15	14	14	14
20°	43	37	31	26	21	17	15	14	14	14
22.5°	45	38	32	27	21	17	14	14	14	14
25°	48	40	34	27	21	17	14	14	14	14
27.5°	49	41	34	28	22	17	14	14	14	14
30°	51	43	36	28	22	17	14	14	14	14
32.5°	51	43	36	29	22	16	14	14	14	14
35°	52	44	37	29	21	16	14	14	14	14
37.5°	52	45	37	28	21	16	14	14	13	13
40°	52	45	37	28	21	16	13	13	12	12
42.5°	52	45	36	27	20	16	13	12	11	11
45°	52	45	35	26	20	15	12	11	10	10
47.5°	52	44	34	25	19	15	11	9	8	8
50°	52	44	33	24	19	14	9	8	7	7
52.5°	52	44	32	24	19	13	8	7	6	5
55°	52	43	31	23	18	12	7	5	4	4
57.5°	51	42	29	22	18	11	5	4	3	3
60°	51	41	28	22	17	10	4	3	3	3
62.5°	50	39	27	21	16	8	3	2	2	2
65°	49	38	26	21	15	7	2	1	1	1
67.5°	47	36	25	20	14	6	1	1	1	1
70°	46	34	24	19	13	5	0	0	0	0
72.5°	44	32	23	18	12	4	0	0	0	0
75°	42	31	22	17	11	4	0	0	0	0
77.5°	40	29	21	17	10	3	0	0	0	0
80°	39	27	20	16	9	3	0	0	0	0
82.5°	38	26	19	15	9	3	0	0	0	0
85°	36	24	18	15	8	3	0	0	0	0
87.5°	36	24	18	14	8	3	0	0	0	0
90°	35	24	19	15	8	3	0	0	0	0
92.5°	35	24	18	14	8	3	0	0	0	0
95°	36	25	19	15	9	3	0	0	0	0
97.5°	37	26	20	15	9	3	0	0	0	0
98°	37	26	20	15	9	3	0	0	0	0
100°	39	27	20	16	9	3	0	0	0	0
102.5°	40	29	21	17	10	3	0	0	0	0
105°	42	31	22	18	11	3	0	0	0	0
107.5°	45	33	24	19	12	4	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	47	35	25	20	13	5	0	0	0	0
112.5°	48	37	26	21	14	6	1	0	0	0
115°	49	38	27	21	16	7	2	1	1	1
117.5°	50	40	28	22	17	9	3	2	2	2
120°	51	41	29	22	18	10	4	3	2	2
122.5°	51	41	30	23	18	11	5	4	3	3
125°	50	42	30	23	19	13	7	5	4	4
127.5°	51	43	31	24	19	13	8	6	5	5
130°	51	43	32	24	20	14	10	8	7	6
132.5°	51	43	34	25	20	15	11	9	8	8
135°	51	43	34	25	20	16	12	11	10	10
137.5°	51	43	35	26	20	16	13	12	12	12
140°	51	43	36	27	20	17	14	13	13	13
142.5°	50	43	35	27	21	17	15	14	14	14
145°	50	42	35	28	21	17	15	15	14	15
147.5°	50	41	35	28	21	17	15	15	15	15
150°	49	40	34	27	21	17	15	15	15	15
152.5°	48	40	33	27	21	17	15	15	15	15
155°	46	39	32	26	21	17	15	15	15	15
157.5°	44	37	31	26	21	17	15	14	14	14
160°	42	36	30	25	20	17	15	15	14	14
162.5°	39	34	28	24	20	17	15	15	15	15
165°	36	31	27	23	19	16	15	15	15	15
167.5°	32	28	25	22	19	17	15	15	15	15
170°	28	26	23	20	18	17	16	16	15	16
172.5°	25	23	21	19	18	17	16	16	16	16
175°	22	21	20	19	18	17	17	17	17	17
177.5°	20	19	19	18	18	18	18	17	17	18
180°	19	19	19	19	19	19	19	19	19	19

(END OF REPORT)