

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: G1-1710-337-10

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

Test Date: 11/09/17



Test Information

Test Method: LM-79-08
Report Number: G1-1710-337-10
Test Lab: INNOVATION CENTER(G1)
Test Date: 11/09/17
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: B95-VE-BLK-LD4-12W-40-CL-120-EDC1
Description: VR 2000 BRICK LED WITH CLEAR LENS & VERTICAL EYELID FLAT BLACK
Light Source: (56) NICHIA 4000K LEDS
1FS402256M8404
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER @ 240mA
OT25UNVDIM1F0240

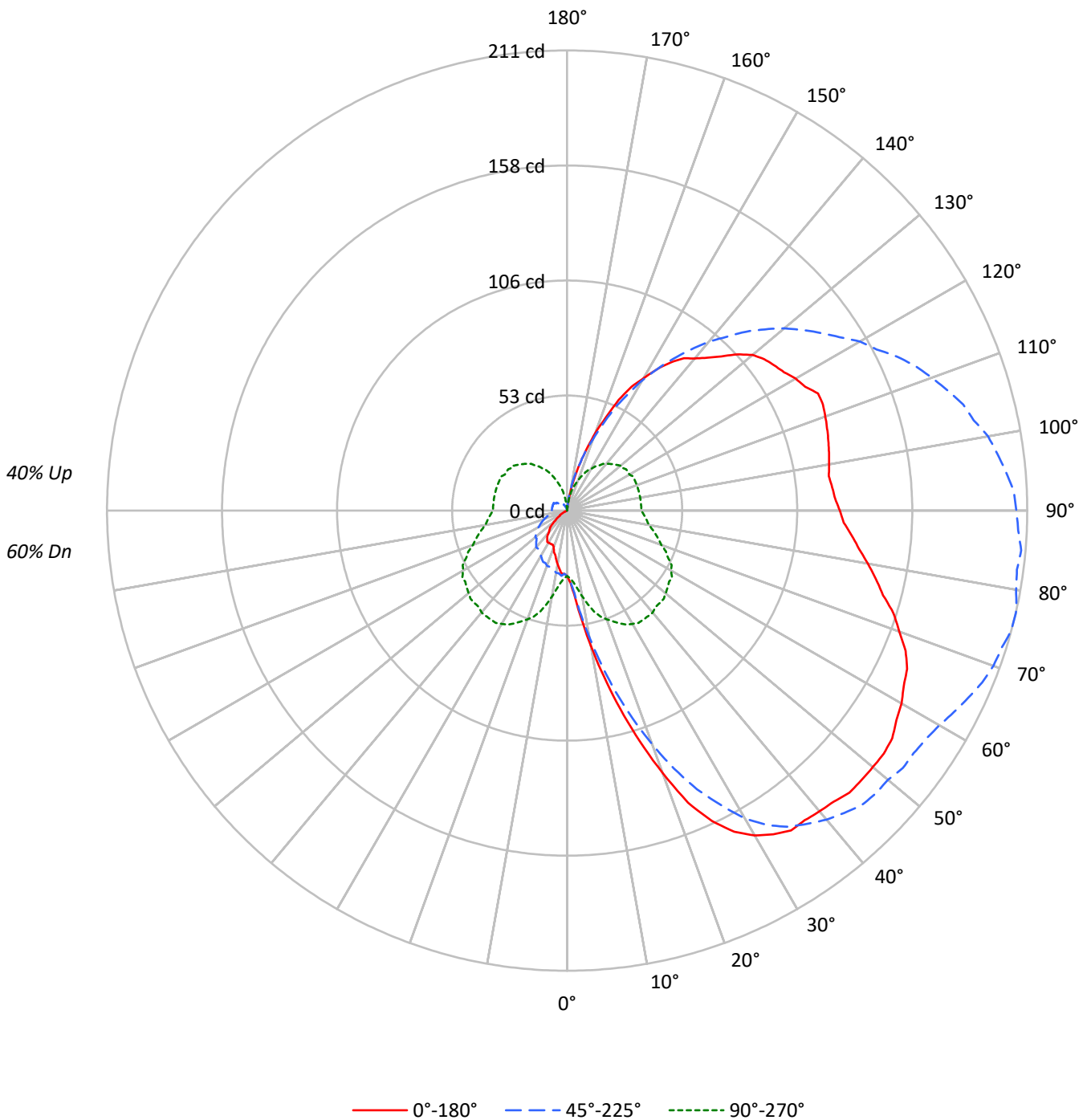
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 883.4 lumens
Efficiency: N/A
Efficacy: 75.5 lumens/watt
Spacing Criteria (0/90/45): 3.06 / 2.44 / 3.15
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 (Ain): 0.0983
Voltage Rise (V): NR
Power Factor: 0.9943
Total Harmonic Distortion (THDi): 6.55
Frequency (hertz): 60
Stabilization Time: 0.5 HR
Operation Time: 7.0 HR
Ambient Temperature (°C): 25.0
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	109	109	109	109	102	102	102	102	89	89	89	76	76	76	65	65	65	60
1	95	89	83	77	88	82	77	72	70	66	63	60	57	54	50	47	45	40
2	85	75	66	59	78	69	62	55	59	53	48	50	45	41	41	37	34	30
3	76	64	55	47	70	59	51	44	50	44	38	42	37	32	35	30	27	23
4	69	55	46	38	63	51	43	36	44	37	31	37	31	26	30	25	22	18
5	63	49	39	32	57	45	36	30	38	31	26	32	26	22	26	22	18	15
6	57	43	34	27	53	40	31	25	34	27	22	29	23	19	23	19	15	12
7	53	39	29	23	48	36	28	22	31	24	19	26	20	16	21	17	13	10
8	49	35	26	20	45	32	24	19	28	21	16	23	18	14	19	15	11	9
9	45	32	23	17	42	29	22	16	25	19	14	21	16	12	18	13	10	8
10	42	29	21	15	39	27	19	14	23	17	12	19	14	11	16	12	9	7

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	3126	3126	3126
5°	3400	2964	2528
10°	4751	3178	1885
15°	6289	3442	1405
20°	7748	3488	1090
25°	8738	3490	946
30°	8922	3460	882
35°	8756	3347	783
40°	8391	3217	606
45°	8208	3068	493
50°	7966	2949	305
55°	7754	2808	170
60°	7439	2690	126
65°	7186	2497	42
70°	6780	2271	0
75°	6337	2107	0
80°	6017	1953	0
85°	5774	1912	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	3.5	0.4
10°-20°	15.9	1.8
20°-30°	36.0	4.1
30°-40°	56.5	6.4
40°-50°	71.4	8.1
50°-60°	81.7	9.2
60°-70°	87.5	9.9
70°-80°	88.1	10.0
80°-90°	85.5	9.7
90°-100°	82.0	9.3
100°-110°	76.1	8.6
110°-120°	66.8	7.6
120°-130°	53.6	6.1
130°-140°	38.9	4.4
140°-150°	24.6	2.8
150°-160°	11.7	1.3
160°-170°	3.4	0.4
170°-180°	0.2	0.0
0°-30°	55.5	6.3
0°-40°	111.9	12.7
0°-60°	265.1	30.0
0°-90°	526.1	59.6
90°-120°	224.8	25.4
90°-150°	341.9	38.7
90°-180°	357.0	40.4
0°-180°	883.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	30	30	30	30	30	
5°	39	38	33	30	29	5
15°	94	86	48	28	21	28
25°	157	141	57	26	17	72
35°	179	177	61	23	16	112
45°	183	191	60	20	11	141
55°	182	194	57	17	4	162
65°	172	203	51	13	1	170
75°	150	211	42	9	0	159
85°	131	209	36	7	0	109
90°	125	206	34	7	0	69
95°	122	202	34	7	0	100
105°	124	188	34	7	0	131
115°	127	167	34	7	0	124
125°	116	142	33	6	0	104
135°	100	116	30	5	0	78
145°	83	85	25	4	0	52
155°	56	52	19	2	0	26
165°	22	22	11	1	0	7
175°	1	0	0	0	0	0
180°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	30	30	30	30	30	30	30	30	30	30	30
2.5°	33	33	33	33	33	32	32	32	32	31	31
5°	39	40	40	39	39	39	38	37	36	34	33
7.5°	50	50	50	50	49	49	48	45	42	39	37
10°	63	63	63	64	62	61	59	55	50	45	41
12.5°	78	79	78	79	77	75	72	66	59	52	46
15°	94	95	94	95	92	90	86	78	68	58	50
17.5°	111	111	111	112	109	106	100	89	76	64	54
20°	128	129	127	127	124	121	114	101	85	70	58
22.5°	145	145	144	144	139	136	128	112	93	75	61
25°	157	157	157	158	154	149	141	122	100	80	63
27.5°	166	167	168	170	167	162	152	131	106	84	65
30°	172	173	177	180	178	173	163	138	112	87	67
32.5°	176	177	183	188	187	182	171	144	116	90	68
35°	179	180	185	195	194	189	177	150	118	92	68
37.5°	179	182	186	199	200	194	181	153	120	92	69
40°	180	183	189	202	205	198	185	155	120	93	69
42.5°	181	184	192	204	208	201	188	156	122	94	68
45°	183	185	193	204	212	204	191	158	124	94	68
47.5°	183	185	191	206	214	206	192	159	125	95	68
50°	183	185	189	208	216	209	192	159	126	94	67
52.5°	183	186	190	207	216	211	194	161	126	95	67
55°	182	186	191	208	216	213	194	163	127	95	67
57.5°	179	184	193	210	216	214	195	164	127	95	66
60°	177	181	194	209	216	216	197	164	127	94	64
62.5°	174	178	194	209	216	217	200	166	127	93	63
65°	172	174	192	207	216	218	203	167	126	91	60
67.5°	168	170	189	207	218	219	206	167	125	89	58
70°	162	166	186	204	218	221	208	167	124	86	55
72.5°	157	162	182	204	220	223	209	167	123	84	52
75°	150	156	179	205	220	222	211	167	121	81	50
77.5°	145	150	174	204	220	223	211	165	119	79	48
80°	140	145	171	203	219	222	209	164	117	76	46
82.5°	135	140	168	202	217	219	208	163	115	74	45
85°	131	136	165	201	217	219	209	163	113	73	44
87.5°	127	133	163	199	215	216	207	162	112	71	43
90°	125	130	161	196	212	214	206	161	111	71	42
92.5°	123	129	159	193	211	213	205	160	112	71	42
95°	122	128	157	190	208	209	202	159	110	71	42
97.5°	121	127	155	186	204	208	199	157	110	70	42
100°	122	128	153	183	201	205	196	156	109	70	42
102.5°	123	128	153	179	196	200	191	153	108	70	42
105°	124	130	151	175	192	197	188	151	107	70	42
107.5°	125	131	151	173	189	192	183	148	105	69	42
110°	126	130	149	170	184	187	178	144	104	68	42



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
112.5°	127	129	147	166	180	183	173	142	102	68	42
115°	127	127	144	163	176	178	167	137	99	66	42
117.5°	123	126	140	158	172	173	160	133	97	65	41
120°	121	123	136	155	167	167	155	128	94	64	41
122.5°	118	121	130	149	161	161	148	124	91	63	40
125°	116	118	124	143	155	154	142	118	88	61	40
127.5°	114	115	120	137	149	146	136	112	84	59	39
130°	111	111	115	130	142	139	130	106	81	58	38
132.5°	106	106	111	123	134	131	123	101	77	56	38
135°	100	101	107	118	127	124	116	95	73	54	37
137.5°	95	96	101	112	119	116	108	90	69	52	35
140°	91	92	96	107	111	108	101	84	65	49	34
142.5°	88	88	91	100	102	100	93	78	61	46	32
145°	83	83	86	91	93	91	85	72	57	43	30
147.5°	77	77	80	82	83	82	77	65	52	40	28
150°	70	71	72	73	74	72	69	58	47	37	27
152.5°	64	64	63	64	64	63	60	52	42	33	25
155°	56	55	54	55	55	54	52	45	38	30	23
157.5°	46	46	45	46	46	45	43	39	32	26	20
160°	38	37	37	37	38	37	35	32	28	22	18
162.5°	29	29	29	30	30	30	29	26	22	19	15
165°	22	22	22	22	23	23	22	21	18	15	12
167.5°	15	15	16	16	17	17	17	15	14	12	10
170°	9	9	10	11	11	11	11	11	10	8	7
172.5°	4	4	4	5	6	6	7	6	6	5	4
175°	1	1	1	0	0	0	0	0	1	1	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: B95-VE-BLK-LD4-12W-40-CL-120-EDC1

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	30	30	30	30	30	30	30	30	30	30	30
2.5°	31	30	30	30	30	29	29	29	29	29	29
5°	33	32	31	31	30	30	29	29	29	29	29
7.5°	36	35	34	32	31	29	28	27	27	27	27
10°	40	39	36	34	31	29	27	26	25	25	25
12.5°	44	42	39	36	32	28	26	24	23	23	23
15°	48	45	41	37	32	28	24	22	22	21	21
17.5°	51	48	43	38	32	27	23	21	20	20	20
20°	53	50	45	38	32	27	22	20	19	18	18
22.5°	55	52	46	39	32	26	21	18	18	17	17
25°	57	54	47	40	32	26	20	17	17	17	17
27.5°	59	55	48	40	32	25	19	17	17	17	17
30°	60	56	48	40	32	24	19	17	17	17	17
32.5°	61	56	49	40	32	24	19	17	17	17	17
35°	61	56	49	40	31	23	18	17	16	16	16
37.5°	61	56	49	40	30	22	18	16	16	15	15
40°	61	56	49	39	29	22	18	15	14	14	13
42.5°	60	56	48	38	27	21	17	14	13	12	12
45°	60	55	48	37	26	20	16	13	12	11	11
47.5°	60	55	47	35	24	19	15	12	10	9	9
50°	59	55	46	33	23	19	14	10	8	7	7
52.5°	58	54	45	32	22	18	13	8	7	6	6
55°	57	53	44	30	21	17	12	7	5	5	4
57.5°	57	52	43	29	21	16	10	5	4	4	4
60°	55	51	41	27	20	15	9	4	3	3	3
62.5°	54	49	39	25	19	14	8	3	2	2	2
65°	51	47	37	24	18	13	6	2	1	1	1
67.5°	49	44	35	23	17	12	5	1	0	1	1
70°	46	42	33	21	16	11	4	0	0	0	0
72.5°	44	40	30	20	15	10	3	0	0	0	0
75°	42	38	28	19	15	9	3	0	0	0	0
77.5°	40	36	26	18	14	8	2	0	0	0	0
80°	38	34	24	17	13	8	2	0	0	0	0
82.5°	37	32	23	16	12	8	2	0	0	0	0
85°	36	31	21	15	12	7	2	0	0	0	0
87.5°	35	30	21	15	12	7	2	0	0	0	0
90°	34	30	21	15	12	7	2	0	0	0	0
92.5°	34	30	21	15	12	7	2	0	0	0	0
95°	34	30	21	15	12	7	2	0	0	0	0
97.5°	34	30	21	15	12	7	2	0	0	0	0
100°	34	30	21	15	12	7	2	0	0	0	0
102.5°	34	30	21	15	12	7	2	0	0	0	0
105°	34	30	22	16	12	7	2	0	0	0	0
107.5°	34	30	22	16	12	7	2	0	0	0	0
110°	34	30	22	16	12	7	2	0	0	0	0



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CATALOG NUMBER: B95-VE-BLK-LD4-12W-40-CL-120-EDC1

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	34	30	23	16	12	7	2	0	0	0	0
115°	34	30	23	16	11	7	2	0	0	0	0
117.5°	34	29	23	16	11	7	2	0	0	0	0
120°	33	29	23	16	11	7	2	0	0	0	0
122.5°	33	29	23	16	11	6	2	0	0	0	0
125°	33	28	22	16	10	6	2	0	0	0	0
127.5°	32	28	22	16	10	6	2	0	0	0	0
130°	32	27	22	16	10	5	1	0	0	0	0
132.5°	31	27	21	16	10	5	1	0	0	0	0
135°	30	26	20	15	10	5	1	0	0	0	0
137.5°	29	25	19	15	9	5	1	0	0	0	0
140°	28	24	18	14	9	5	1	0	0	0	0
142.5°	27	23	17	13	9	4	1	0	0	0	0
145°	25	21	16	12	8	4	1	0	0	0	0
147.5°	24	20	14	10	7	4	1	0	0	0	0
150°	22	19	13	9	6	3	1	0	0	0	0
152.5°	21	18	12	9	5	3	0	0	0	0	0
155°	19	16	12	8	5	2	0	0	0	0	0
157.5°	17	15	11	7	4	2	0	0	0	0	0
160°	15	13	10	6	4	2	0	0	0	0	0
162.5°	13	12	9	6	3	1	0	0	0	0	0
165°	11	10	7	5	3	1	0	0	0	0	0
167.5°	9	8	6	4	2	1	0	0	0	0	0
170°	6	6	4	3	1	0	0	0	0	0	0
172.5°	4	3	2	1	1	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

(END OF REPORT)