

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: G1-1710-337-6

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

Test Date: 11/21/17



**Test Information**

Test Method: LM-79-08  
Report Number: G1-1710-337-6  
Test Lab: INNOVATION CENTER(G1)  
Test Date: 11/21/17  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: B95-HE-BLK-LD4-12W-40-CL-120-EDC1  
Description: VR 2000 BRICK LED WITH CLEAR LENS & HORIZONTAL EYELID FLAT BLACK.  
Light Source: (56) NICHIA 4000K LEDS  
1FS402256M8404  
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER @ 240mA  
OT25UNVDIM1F0240

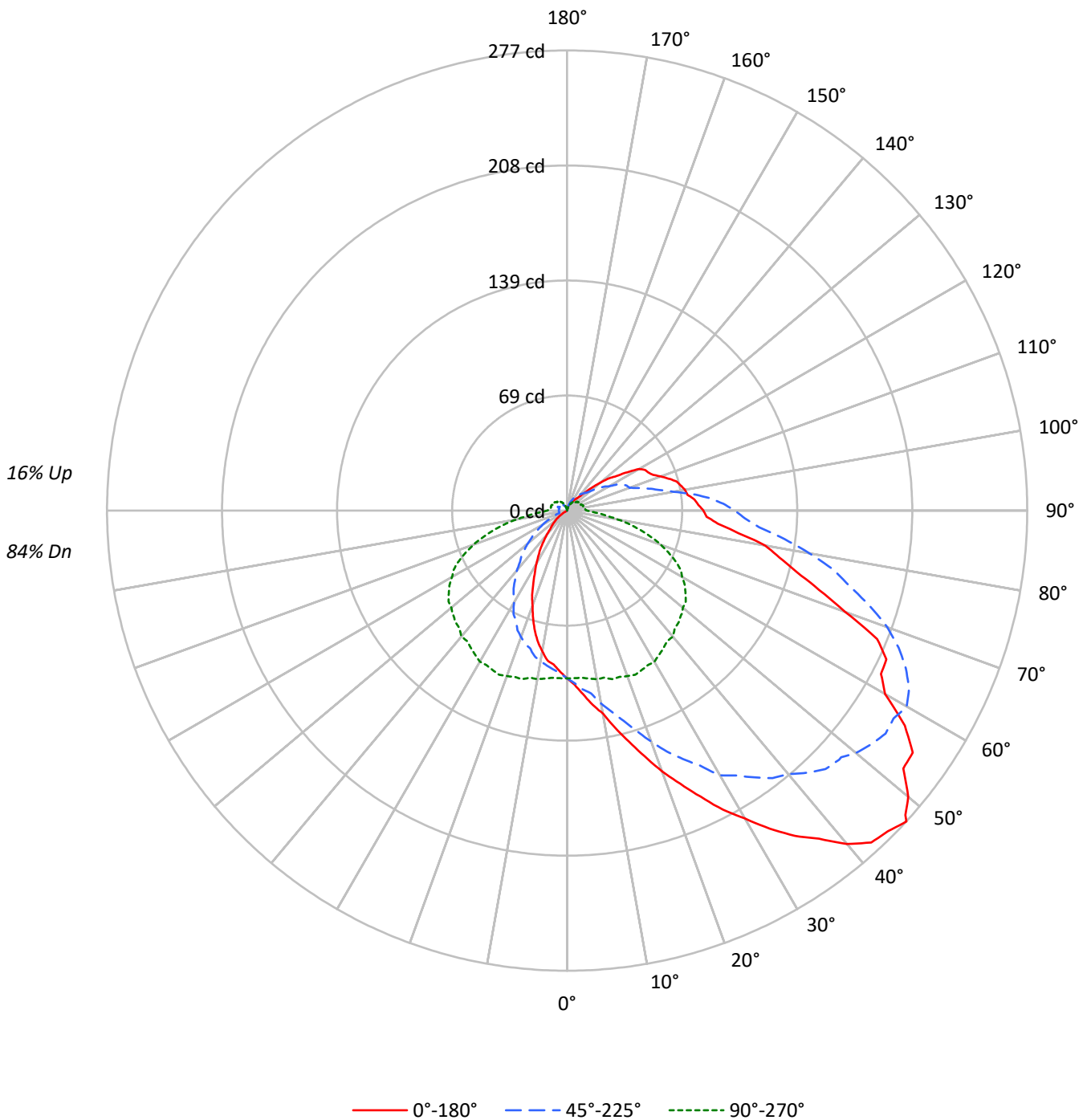
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 734.9 lumens  
Efficiency: N/A  
Efficacy: 62.8 lumens/watt  
Spacing Criteria (0/90/45): 2 / 1.51 / 2.01  
Luminous Opening: Rectangular w/ Sides (W: 0.67' x L: 0.29' x H: 0.35')  
CIE Type: Semi-Direct  
  
Input Watts (W): 11.7  
Input Voltage (V): 120.0  
Input Current (A<sub>in</sub>): 0.0982  
Voltage Rise (V): NR  
Power Factor: 0.9942  
Total Harmonic Distortion (THDi): 6.56%  
Frequency (hertz): 60  
Stabilization Time: 0.5 HR  
Operation Time: 7.0 HR  
Ambient Temperature (°C): 24.9  
Test Distance: 25 FT

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

### Luminous Intensity Polar Plot





TEST NUMBER: G1-1710-337-6

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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				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	111	111	111	111	102	102	102	95	95	95	88	88	88	84
1	101	95	89	84	97	91	86	81	84	80	76	77	74	71	71	68	66	62
2	90	80	72	65	86	77	69	63	71	64	59	65	60	55	60	55	52	48
3	81	69	59	52	77	66	57	50	60	53	47	56	49	44	51	46	42	38
4	73	60	50	42	70	57	48	41	53	45	39	48	42	36	44	39	34	31
5	67	52	42	35	63	50	41	34	46	38	32	43	36	30	39	33	29	26
6	61	47	37	30	58	45	36	29	41	33	27	38	31	26	35	29	24	22
7	56	42	32	26	54	40	31	25	37	29	24	34	27	22	32	26	21	19
8	52	38	29	22	50	36	28	22	34	26	21	31	24	20	29	23	19	16
9	49	34	26	20	46	33	25	19	31	23	18	28	22	17	26	21	16	14
10	45	31	23	17	43	30	22	17	28	21	16	26	20	15	24	19	15	13

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	5591	5591	5591
5°	5576	5363	4672
10°	5741	5294	3982
15°	6227	5268	3243
20°	6823	5233	2492
25°	7410	5189	1872
30°	8041	5136	1390
35°	8729	4975	1023
40°	9378	4948	680
45°	9652	4857	460
50°	9432	4799	317
55°	8966	4774	176
60°	7885	4613	36
65°	7705	4409	0
70°	6644	3948	0
75°	5529	3299	0
80°	4891	2463	0
85°	3885	1706	0



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	9.8	1.3
10°-20°	30.8	4.2
20°-30°	53.8	7.3
30°-40°	77.0	10.5
40°-50°	97.6	13.3
50°-60°	107.1	14.6
60°-70°	103.2	14.0
70°-80°	83.3	11.3
80°-90°	57.0	7.8
90°-100°	40.4	5.5
100°-110°	27.8	3.8
110°-120°	20.0	2.7
120°-130°	13.1	1.8
130°-140°	7.3	1.0
140°-150°	4.2	0.6
150°-160°	2.0	0.3
160°-170°	0.5	0.1
170°-180°	0.0	0.0
0°-30°	94.4	12.8
0°-40°	171.3	23.3
0°-60°	376.1	51.2
0°-90°	619.6	84.3
90°-120°	88.2	12.0
90°-150°	112.8	15.4
90°-180°	115.0	15.6
0°-180°	734.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	101	101	101	101	101	
5°	111	108	101	96	93	11
15°	144	131	105	86	75	42
25°	190	165	106	73	48	89
35°	239	196	101	56	28	150
45°	273	220	95	39	13	210
55°	254	234	87	24	5	223
65°	212	225	72	11	0	205
75°	143	176	46	5	0	154
85°	91	116	19	5	0	81
90°	82	101	12	5	0	45
95°	77	86	11	5	0	61
105°	68	51	10	5	0	71
115°	54	37	9	5	0	54
125°	36	24	9	6	0	34
135°	16	15	7	5	0	13
145°	8	12	6	4	0	5
155°	5	7	4	3	0	2
165°	3	3	2	1	0	1
175°	0	0	0	0	0	0
180°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	6°	15°	25°	35°	45°	55°	65°	75°	85°
0°	101	101	101	101	101	101	101	101	101	101	101
2.5°	105	105	106	106	105	105	104	104	103	103	101
5°	111	110	111	110	110	109	108	107	106	103	102
7.5°	118	118	117	117	117	114	111	111	108	106	103
10°	124	125	124	124	123	120	118	116	112	108	103
12.5°	134	134	133	134	132	127	124	120	115	110	105
15°	144	145	144	144	141	135	131	125	119	113	107
17.5°	155	155	155	155	151	146	139	132	123	114	108
20°	167	167	167	166	163	156	148	137	126	118	110
22.5°	178	178	180	175	172	167	157	144	132	121	110
25°	190	190	190	189	183	176	165	151	138	124	111
27.5°	203	201	202	197	191	186	173	159	142	125	112
30°	214	212	213	208	204	193	184	167	147	128	110
32.5°	227	223	225	220	213	204	189	171	151	129	110
35°	239	235	234	230	225	212	196	179	155	131	110
37.5°	249	249	250	244	234	220	203	184	159	133	109
40°	262	265	263	256	245	228	207	187	164	133	109
42.5°	271	272	271	265	256	235	214	191	167	135	108
45°	273	274	275	270	260	243	220	195	170	137	105
47.5°	277	279	278	276	266	246	222	199	170	139	105
48°	274	279	280	275	265	248	222	198	172	140	105
50°	268	271	269	275	267	248	227	200	173	140	104
52.5°	255	254	255	258	264	249	231	204	174	141	103
55°	254	254	253	250	253	250	234	206	175	141	102
57.5°	241	246	248	249	243	250	233	211	178	142	100
60°	221	227	228	237	240	235	236	212	179	140	97
62.5°	213	216	216	216	229	227	232	211	178	138	93
65°	212	210	210	211	219	224	225	210	177	134	89
67.5°	202	202	203	205	206	217	216	210	176	130	84
70°	178	183	184	193	197	202	205	204	172	126	78
72.5°	159	159	161	172	182	182	191	192	166	118	70
75°	143	145	145	155	170	170	176	179	157	109	62
77.5°	131	132	132	141	155	159	164	165	146	100	55
80°	121	121	121	129	138	148	148	151	135	91	46
82.5°	104	108	109	117	124	132	132	135	124	81	38
85°	91	92	92	104	110	118	116	119	109	70	31
87.5°	84	85	86	95	104	106	107	106	94	59	24
90°	82	83	83	91	102	103	101	98	85	50	19
92.5°	79	81	81	89	97	98	94	90	74	43	16
95°	77	77	78	84	90	90	86	78	63	37	16
97.5°	73	74	74	79	81	80	76	67	53	34	15
100°	72	72	72	74	73	70	65	58	48	32	14
102.5°	70	70	69	69	67	63	57	51	44	30	14
105°	68	67	67	64	61	56	51	47	41	28	13
107.5°	64	63	63	58	54	48	45	42	37	26	13



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	6°	15°	25°	35°	45°	55°	65°	75°	85°
110°	60	60	59	53	47	42	40	38	34	24	12
112.5°	56	56	56	51	45	40	39	36	32	22	12
115°	54	54	54	51	43	39	37	35	30	21	11
117.5°	53	53	53	49	41	36	34	32	27	19	11
120°	50	49	49	45	37	31	29	28	24	17	10
122.5°	43	43	43	41	33	28	27	25	22	16	10
125°	36	37	37	36	31	25	24	22	20	14	10
127.5°	32	31	31	31	28	22	21	20	17	13	9
130°	26	27	26	26	24	20	18	17	16	12	9
132.5°	21	21	21	21	20	17	16	15	14	11	8
135°	16	16	16	16	17	16	15	14	13	10	8
137.5°	12	12	12	13	14	14	14	14	12	10	8
140°	10	10	10	11	12	13	13	13	12	9	7
142.5°	9	9	9	10	11	12	12	12	11	9	7
145°	8	8	8	9	10	11	12	11	10	8	7
147.5°	7	7	7	8	9	10	10	10	9	8	6
150°	6	7	7	7	8	9	9	9	8	7	6
152.5°	6	6	6	7	7	8	8	8	7	6	5
155°	5	5	5	6	6	7	7	7	6	5	4
157.5°	5	5	5	5	6	6	6	5	5	4	4
160°	4	4	4	4	5	5	5	4	4	3	3
162.5°	3	3	3	3	4	4	4	3	3	3	2
165°	3	3	3	3	3	3	3	3	2	2	2
167.5°	2	2	2	2	2	2	2	2	2	1	1
170°	1	2	1	1	2	1	1	1	1	1	1
172.5°	1	1	1	1	1	1	1	1	0	0	1
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



TEST NUMBER: G1-1710-337-6

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

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	101	101	101	101	101	101	101	101	101	101	101
2.5°	101	100	100	98	99	98	97	97	96	96	97
5°	101	100	99	97	97	96	95	95	93	94	93
7.5°	102	101	99	97	96	94	93	92	91	90	91
10°	103	102	99	96	95	92	89	88	87	86	86
12.5°	103	102	99	96	93	90	86	83	81	80	81
15°	105	102	99	95	91	86	82	79	76	75	75
17.5°	105	103	98	94	89	84	78	73	70	68	68
20°	106	103	98	94	87	81	74	67	63	62	61
22.5°	107	102	98	92	86	78	69	62	57	55	55
25°	106	102	97	90	83	73	64	56	51	48	48
27.5°	105	101	96	89	79	70	59	50	45	43	42
30°	105	99	94	87	77	64	54	45	40	37	37
32.5°	103	97	92	85	73	60	49	40	35	32	32
35°	101	96	90	82	70	56	44	36	30	28	28
37.5°	99	94	88	79	65	51	40	32	26	23	23
40°	99	92	85	75	61	47	35	27	22	19	19
42.5°	96	90	82	72	57	42	31	23	18	16	15
45°	95	88	80	68	53	39	28	19	15	13	13
47.5°	93	85	76	65	49	35	24	16	12	11	11
48°	93	85	76	64	48	34	23	16	12	11	10
50°	91	82	73	61	45	31	21	13	10	9	9
52.5°	90	81	70	57	41	27	18	11	8	7	7
55°	87	77	65	53	37	24	15	9	6	5	5
57.5°	84	74	62	49	33	20	12	7	4	3	3
60°	80	70	57	44	29	17	9	5	2	1	1
62.5°	77	65	53	40	25	14	7	3	1	0	0
65°	72	61	48	35	21	11	5	2	0	0	0
67.5°	66	56	42	30	17	9	4	0	0	0	0
70°	60	50	36	25	13	7	3	0	0	0	0
72.5°	53	43	31	20	10	5	2	0	0	0	0
75°	46	37	25	15	8	5	2	0	0	0	0
77.5°	39	31	20	12	8	5	2	0	0	0	0
80°	31	24	16	11	8	5	2	0	0	0	0
82.5°	24	19	13	10	8	5	2	1	0	0	0
85°	19	14	12	10	8	5	2	1	0	0	0
87.5°	14	12	11	10	8	5	2	1	0	0	0
90°	12	11	11	10	8	5	2	1	0	0	0
92.5°	11	11	11	10	8	5	2	1	0	0	0
95°	11	11	11	10	8	5	2	1	0	0	0
97.5°	10	11	11	10	8	5	3	1	0	0	0
100°	10	10	11	10	8	5	3	1	0	0	0
102.5°	10	10	10	10	8	5	3	1	0	0	0
105°	10	10	10	9	8	5	3	1	0	0	0
107.5°	10	10	10	9	8	5	3	1	0	0	0





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

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	10	10	10	9	8	6	3	1	0	0	0
112.5°	9	10	10	9	8	6	3	1	0	0	0
115°	9	10	10	9	8	5	3	1	0	0	0
117.5°	9	9	10	9	8	5	3	1	0	0	0
120°	9	9	10	9	8	5	3	1	0	0	0
122.5°	9	9	10	9	8	6	3	1	0	0	0
125°	9	9	9	9	7	6	3	1	0	0	0
127.5°	8	9	9	9	7	5	3	1	0	0	0
130°	8	9	9	8	7	5	3	1	0	0	0
132.5°	8	8	9	8	7	5	3	1	0	0	0
135°	7	8	9	8	7	5	3	1	0	0	0
137.5°	7	8	8	8	7	5	3	1	0	0	0
140°	7	7	8	8	6	5	3	1	0	0	0
142.5°	7	7	8	7	6	4	3	1	0	0	0
145°	6	6	7	7	6	4	3	1	0	0	0
147.5°	6	6	6	6	5	4	2	1	0	0	0
150°	5	5	6	5	5	4	2	1	0	0	0
152.5°	5	5	5	5	4	3	2	1	0	0	0
155°	4	4	4	4	4	3	2	1	0	0	0
157.5°	4	4	4	4	3	2	1	0	0	0	0
160°	3	3	3	3	2	2	1	0	0	0	0
162.5°	2	2	2	2	2	1	1	0	0	0	0
165°	2	2	2	2	1	1	0	0	0	0	0
167.5°	1	1	1	1	1	1	0	0	0	0	0
170°	1	1	1	1	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

(END OF REPORT)