

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: G1-1710-337-3

Luminaire Tested: **B95-PP-BLK-LD4-16W-40-CL-120-EDC1**

Test Date: 11/07/17



**Test Information**

Test Method: LM-79-08  
Report Number: G1-1710-337-3  
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-LD4-16W-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 @ 325mA  
OT25UNVDIM1F0325

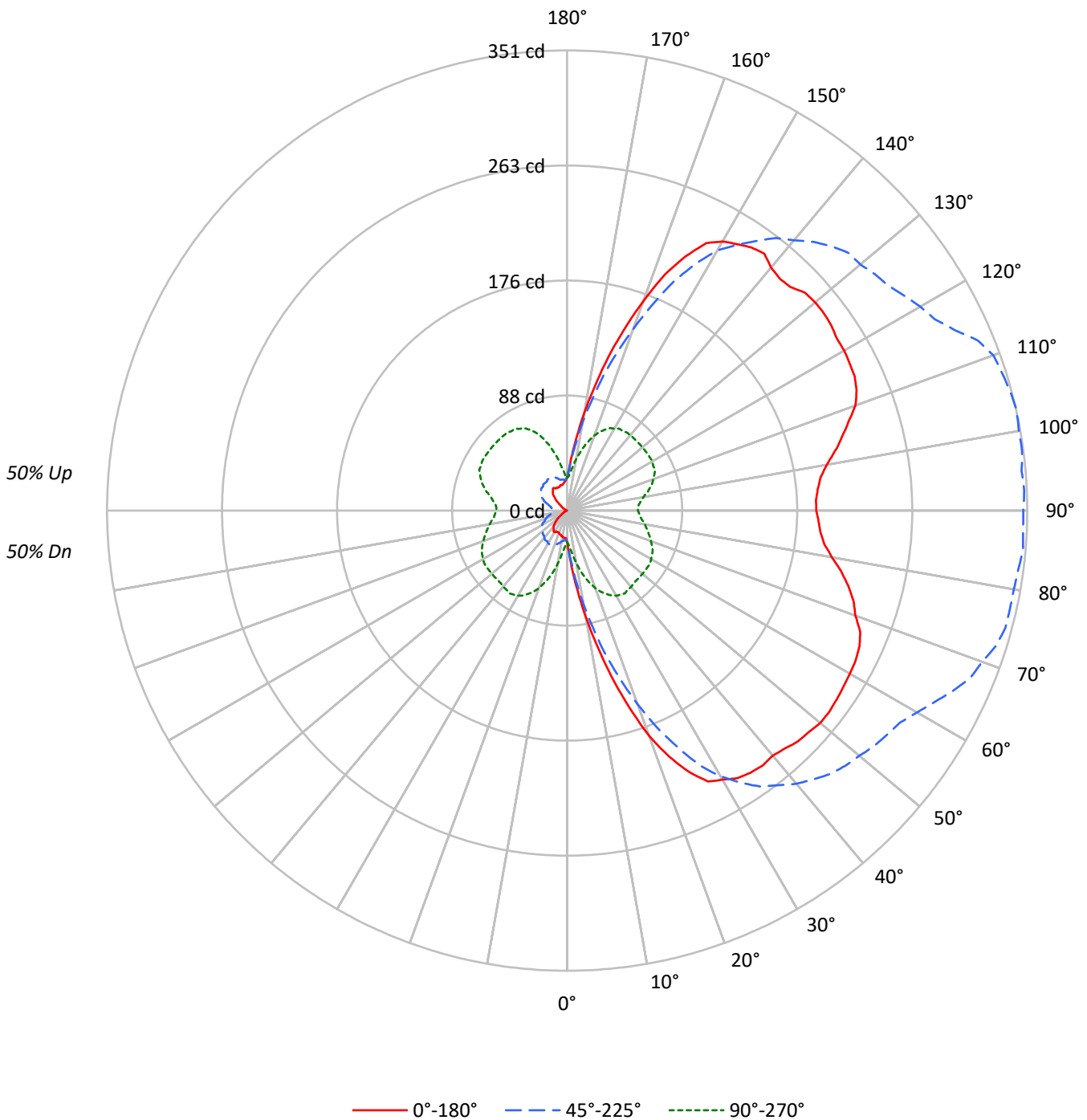
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1551.3 lumens  
Efficiency: N/A  
Efficacy: 100.7 lumens/watt  
Spacing Criteria (0/90/45): 3.89 / 3.09 / 4.16  
Luminous Opening: Rectangular w/ Sides (W: 0.35' x L: 0.29' x H: 0.67')  
CIE Type: General Diffuse  
  
Input Watts (W): 15.4  
Input Voltage (V): 120.0  
Input Current (Ain): 0.129  
Voltage Rise (V): NR  
Power Factor: 0.9969  
Total Harmonic Distortion (THDi): 5.31%  
Frequency (hertz): 60  
Stabilization Time: 0.5 HR  
Operation Time: 7.0 HR  
Ambient Temperature (°C): 25.4  
Test Distance: 25 FT

TEST NUMBER: G1-1710-337-3

CATALOG NUMBER: B95-PP-BLK-LD4-16W-40-CL-120-EDC1

### Luminous Intensity Polar Plot





TEST NUMBER: G1-1710-337-3

CATALOG NUMBER: B95-PP-BLK-LD4-16W-40-CL-120-EDC1

**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°	2501	2501	2501
5°	3923	2694	1831
10°	6259	3257	1508
15°	8764	3801	1271
20°	11077	4146	1090
25°	12244	4286	1002
30°	12293	4324	986
35°	11936	4226	881
40°	11375	4008	746
45°	11168	3834	583
50°	10970	3749	392
55°	10693	3694	213
60°	10464	3620	126
65°	10277	3525	84
70°	9793	3357	0
75°	9378	3211	0
80°	8810	3084	0
85°	8551	2974	0



TEST NUMBER: G1-1710-337-3

CATALOG NUMBER: B95-PP-BLK-LD4-16W-40-CL-120-EDC1

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	3.5	0.2
10°-20°	19.5	1.3
20°-30°	48.2	3.1
30°-40°	77.5	5.0
40°-50°	100.4	6.5
50°-60°	119.2	7.7
60°-70°	132.5	8.5
70°-80°	138.2	8.9
80°-90°	137.8	8.9
90°-100°	138.3	8.9
100°-110°	139.5	9.0
110°-120°	133.5	8.6
120°-130°	118.5	7.6
130°-140°	99.4	6.4
140°-150°	76.8	5.0
150°-160°	46.8	3.0
160°-170°	18.5	1.2
170°-180°	3.4	0.2
0°-30°	71.3	4.6
0°-40°	148.8	9.6
0°-60°	368.3	23.7
0°-90°	776.8	50.1
90°-120°	411.2	26.5
90°-150°	705.8	45.5
90°-180°	775.0	50.0
0°-180°	1551.3	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	24	24	24	24	24	
5°	45	41	30	23	21	5
15°	131	114	53	26	19	39
25°	220	199	70	28	18	101
35°	244	257	77	28	18	153
45°	249	284	75	26	13	192
55°	251	298	75	24	5	225
65°	246	325	72	19	2	242
75°	222	346	64	14	0	234
85°	194	349	56	11	0	161
90°	190	348	54	11	0	104
95°	192	348	55	11	0	159
105°	217	350	65	14	0	230
115°	242	326	74	20	1	239
125°	246	299	75	25	5	220
135°	241	285	75	26	13	188
145°	245	251	74	27	19	153
155°	214	193	68	28	19	98
165°	121	106	51	25	20	36
175°	42	40	30	23	22	5
180°	25	25	25	25	25	



TEST NUMBER: G1-1710-337-3

CATALOG NUMBER: B95-PP-BLK-LD4-16W-40-CL-120-EDC1

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	24	24	24	24	24	24	24	24	24	24	24
2.5°	32	32	32	31	31	31	29	28	28	27	26
5°	45	45	44	44	43	41	39	37	34	31	30
7.5°	62	62	60	61	59	56	52	46	42	37	35
10°	83	81	81	80	78	73	67	59	51	44	41
12.5°	105	105	105	103	100	92	84	72	60	51	47
15°	131	129	129	128	124	114	100	85	70	58	53
17.5°	157	155	155	153	148	135	119	100	81	65	58
20°	183	181	181	178	172	157	138	113	89	71	63
22.5°	203	202	203	202	196	179	154	125	97	76	67
25°	220	219	221	222	218	199	170	136	105	80	70
27.5°	233	232	237	240	238	219	184	147	112	84	73
30°	237	239	250	255	255	234	197	155	117	87	75
32.5°	242	244	257	267	270	246	207	162	120	88	76
35°	244	247	258	276	282	257	217	165	123	89	77
37.5°	245	249	261	283	291	264	222	167	125	89	76
40°	244	250	265	288	299	272	223	168	126	88	76
42.5°	246	251	268	291	308	278	226	172	127	88	75
45°	249	254	270	296	315	284	230	176	128	88	75
47.5°	250	255	270	302	322	288	233	180	130	88	75
50°	252	258	271	307	327	291	237	182	130	88	75
52.5°	252	261	275	310	330	295	243	184	131	88	75
55°	251	261	281	316	332	298	248	187	132	88	75
57.5°	250	259	285	320	335	301	251	187	133	88	75
60°	249	257	288	320	337	308	254	190	133	87	74
62.5°	248	255	291	320	336	316	260	192	132	86	73
65°	246	252	291	321	340	325	264	192	131	84	72
67.5°	242	249	288	320	345	333	267	192	128	82	70
70°	234	246	284	321	350	337	268	191	125	80	68
72.5°	229	242	281	324	355	343	269	190	123	78	66
75°	222	235	276	328	357	346	270	188	120	76	64
77.5°	214	225	272	331	360	346	268	184	117	74	62
80°	205	216	268	332	361	346	266	182	113	71	60
82.5°	198	209	268	336	362	347	264	179	111	69	58
85°	194	204	268	337	362	349	264	177	109	68	56
87.5°	192	202	267	339	362	348	262	175	108	67	55
90°	190	202	266	338	363	348	263	176	106	66	54
92.5°	190	202	266	338	364	349	263	178	108	66	54
95°	192	204	265	338	364	348	264	178	109	67	55
97.5°	195	210	267	336	367	350	265	182	111	69	57
100°	201	216	270	335	366	350	268	185	114	71	59
102.5°	209	224	275	330	367	351	269	187	117	74	62
103°	211	226	276	329	367	351	269	188	118	74	63
105°	217	233	281	326	365	350	271	190	120	76	65
107.5°	225	237	286	325	361	348	273	193	124	79	68



TEST NUMBER: G1-1710-337-3

CATALOG NUMBER: B95-PP-BLK-LD4-16W-40-CL-120-EDC1

**CANDELA DISTRIBUTION (continued):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
110°	234	241	289	325	355	346	271	195	128	82	70
112.5°	239	244	289	324	349	339	270	195	131	85	72
115°	242	247	289	324	348	326	265	195	133	86	74
117.5°	243	248	286	323	346	316	261	193	134	88	74
120°	244	249	280	321	344	311	258	191	134	88	75
122.5°	244	251	275	318	341	305	254	188	133	89	75
125°	246	251	270	315	338	299	247	185	131	88	75
127.5°	247	250	266	312	332	296	240	182	129	88	75
130°	247	248	267	304	326	292	234	180	127	87	75
132.5°	246	247	268	300	320	291	228	178	126	87	75
135°	241	245	268	297	312	285	223	174	125	88	75
137.5°	240	245	266	296	306	278	221	170	125	87	75
140°	242	248	264	292	298	269	221	165	124	87	75
142.5°	247	251	264	285	292	262	219	163	122	87	75
145°	245	249	266	276	283	251	213	162	120	86	74
147.5°	241	244	261	264	268	240	202	159	117	85	74
150°	237	240	249	249	252	229	190	151	114	84	72
152.5°	230	230	234	235	233	212	176	141	108	81	71
155°	214	214	217	217	210	193	163	130	101	77	68
157.5°	195	196	196	195	185	170	148	120	93	73	65
160°	170	171	171	170	162	147	129	107	86	68	61
162.5°	145	145	145	144	138	126	110	93	76	62	56
165°	121	120	120	121	116	106	93	80	66	55	51
167.5°	96	96	96	96	93	85	77	67	57	49	45
170°	76	75	76	75	73	69	62	55	48	42	40
172.5°	57	56	57	56	55	52	49	44	40	36	34
175°	42	42	42	42	40	40	37	35	33	31	30
177.5°	32	31	31	31	30	30	29	28	28	27	26
180°	25	25	25	25	25	25	25	25	25	25	25



TEST NUMBER: G1-1710-337-3

CATALOG NUMBER: B95-PP-BLK-LD4-16W-40-CL-120-EDC1

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	24	24	24	24	24	24	24	24	24	24
2.5°	26	25	24	23	22	22	22	22	21	21
5°	29	27	25	24	23	22	21	21	21	21
7.5°	33	30	27	25	23	22	21	21	21	21
10°	38	34	30	27	24	22	20	20	20	20
12.5°	44	38	33	29	25	22	20	20	19	20
15°	49	42	36	31	26	22	20	19	19	19
17.5°	53	46	39	32	27	22	19	19	19	19
20°	57	49	41	34	27	22	19	19	18	18
22.5°	60	51	43	35	28	22	19	18	18	18
25°	63	53	44	36	28	22	19	18	18	18
27.5°	66	55	46	37	29	22	19	18	18	18
30°	67	57	47	38	29	22	18	19	19	19
32.5°	68	58	48	38	28	22	18	19	19	19
35°	69	58	49	38	28	21	18	19	18	18
37.5°	69	59	49	37	28	21	18	18	17	17
40°	69	59	48	37	27	21	18	17	16	16
42.5°	68	59	48	35	26	21	17	16	15	15
45°	69	59	47	34	26	20	16	14	13	13
47.5°	69	59	45	32	25	19	14	13	11	11
50°	69	58	44	32	25	18	13	11	9	9
52.5°	69	58	42	31	24	17	11	8	7	7
55°	68	57	40	30	24	16	9	7	6	5
57.5°	68	56	39	29	23	14	7	5	4	4
60°	67	54	37	29	22	13	5	4	3	3
62.5°	66	52	36	28	21	11	4	3	3	3
65°	64	50	34	27	19	9	3	2	2	2
67.5°	63	47	33	26	18	8	1	1	1	1
70°	60	45	32	25	17	6	0	0	0	0
72.5°	58	43	30	24	16	5	0	0	0	0
75°	56	40	29	23	14	4	0	0	0	0
77.5°	53	38	27	22	13	4	0	0	0	0
80°	51	35	26	20	12	3	0	0	0	0
82.5°	50	34	25	20	11	3	0	0	0	0
85°	48	32	24	19	11	3	0	0	0	0
87.5°	47	31	24	19	11	3	0	0	0	0
90°	46	31	24	19	11	4	0	0	0	0
92.5°	46	32	24	19	11	4	0	0	0	0
95°	47	32	25	19	11	4	0	0	0	0
97.5°	49	34	26	20	12	4	0	0	0	0
100°	51	36	27	21	12	4	0	0	0	0
102.5°	53	38	28	22	13	4	0	0	0	0
103°	54	39	28	22	13	4	0	0	0	0
105°	56	41	30	23	14	4	0	0	0	0
107.5°	59	44	31	24	15	5	0	0	0	0





TEST NUMBER: G1-1710-337-3

CATALOG NUMBER: B95-PP-BLK-LD4-16W-40-CL-120-EDC1

**CANDELA DISTRIBUTION (continued):**

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	62	46	32	26	17	6	0	0	0	0
112.5°	64	49	34	27	19	8	1	0	0	1
115°	65	50	35	28	20	10	2	1	1	1
117.5°	66	52	36	29	22	12	4	2	2	2
120°	67	54	38	29	23	13	5	4	3	3
122.5°	67	55	39	30	24	15	7	5	4	4
125°	67	56	40	30	25	16	9	6	5	5
127.5°	67	56	41	31	25	18	11	8	7	6
130°	68	57	43	31	26	19	13	10	9	8
132.5°	68	57	44	32	26	20	15	12	11	11
135°	68	57	45	33	26	21	16	15	13	13
137.5°	68	57	46	34	27	21	18	16	15	15
140°	67	57	46	35	27	22	18	17	17	17
142.5°	67	56	47	36	27	22	19	19	18	18
145°	66	55	46	36	27	22	20	20	19	19
147.5°	66	55	45	36	28	22	20	20	20	20
150°	65	54	45	36	28	22	19	20	20	20
152.5°	63	53	43	35	28	22	19	19	19	19
155°	62	51	42	35	28	22	19	19	19	19
157.5°	59	50	41	33	27	22	20	19	19	19
160°	56	47	39	32	27	22	20	19	19	19
162.5°	52	45	37	31	26	22	20	20	19	19
165°	47	41	35	30	25	22	20	20	20	20
167.5°	42	37	33	28	24	22	20	20	20	20
170°	38	34	30	27	24	22	21	20	20	20
172.5°	33	30	28	25	24	22	21	21	21	21
175°	29	27	26	25	23	23	22	22	22	22
177.5°	26	25	25	24	24	23	23	23	23	23
180°	25	25	25	25	25	25	25	25	25	25

(END OF REPORT)