

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: P32775

Luminaire Tested: **FWLDL-D-18-LD3-UNV-STD-35-80/84-ED**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P32775
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FWLDL-D-18-LD3-UNV-STD-35-80/84-ED
Description: FAILSAFE FWLDL LED FIXTURE WITH .125" PATTERN 12 ACRYLIC LENS
& .125" POLYCARBONATE LENS
Light Source: (28) LG 3500K LED
1UT211028835
Ballast/Driver: (1) ADVANCE ELECTRONIC DRIVER
XI025C100V036XPL1

Summary

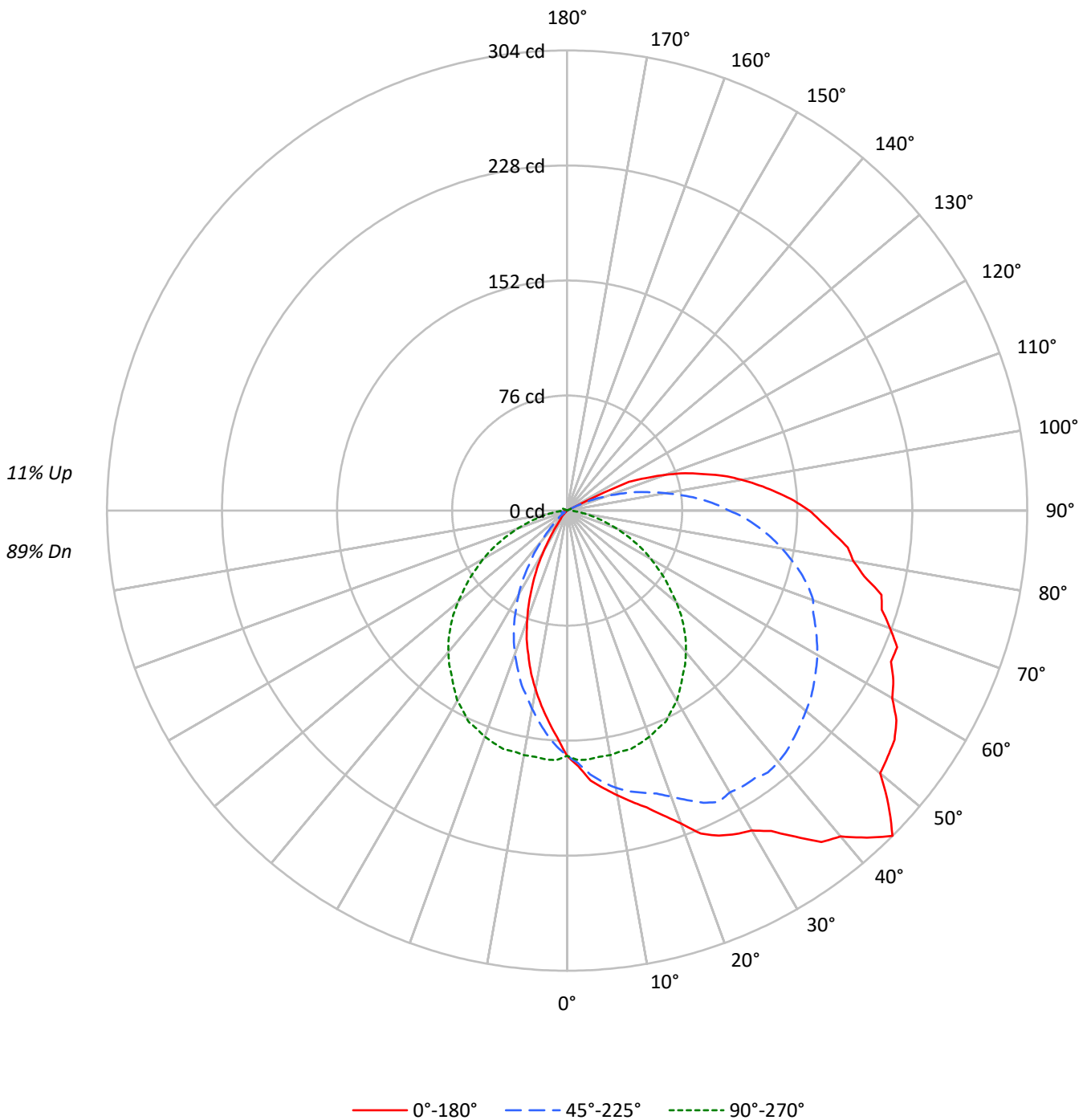
Lumens per Lamp: N/A
Luminaire Lumens: 701.8 lumens
Efficiency: N/A
Efficacy: 49.4 lumens/watt
Spacing Criteria (0/90/45): 1.28 / 1.3 / 1.43
Luminous Opening: Rectangular (W 0.17' x L: 1.17' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 14.2
Input Voltage (V): NR
Input Current (Ain): 0.1209
Voltage Rise (V): NR
Power Factor: 0.9955
Total Harmonic Distortion (THDi): 18.5%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 3 HR
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	116	116	116	116	112	112	112	112	105	105	105	98	98	98	92	92	92	89
1	102	96	90	85	98	93	87	83	86	82	78	80	77	74	75	72	69	66
2	92	82	74	67	88	79	71	65	73	67	62	68	63	59	64	59	56	53
3	83	71	61	54	79	68	60	53	64	56	50	59	53	48	55	50	46	43
4	75	62	52	45	72	60	51	44	56	48	42	52	46	40	49	43	38	36
5	69	55	45	38	66	53	44	37	50	42	36	46	40	34	43	38	33	30
6	64	49	40	33	61	48	39	32	45	37	31	42	35	30	39	33	29	26
7	59	44	35	29	56	43	34	28	40	33	27	38	31	26	36	30	25	23
8	55	40	31	25	52	39	31	25	37	29	24	35	28	23	33	27	22	20
9	51	37	28	23	49	36	28	22	34	27	22	32	26	21	30	24	20	18
10	48	34	26	20	46	33	25	20	31	24	19	30	23	19	28	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	8968	8968	8968
5°	9947	9169	7780
10°	10736	9219	6745
15°	11634	9342	5674
20°	12960	9367	4536
25°	14476	9406	3298
30°	15597	9269	1982
35°	17773	8988	811
40°	20306	8816	434
45°	23799	8533	0
50°	23253	8095	0
55°	25479	7624	97
60°	27457	7086	221
65°	30913	6418	262
70°	36741	5665	324
75°	45985	4705	214
80°	61208	3825	319
85°	112422	3176	635



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	15.4	2.2
10°-20°	44.1	6.3
20°-30°	68.0	9.7
30°-40°	83.4	11.9
40°-50°	91.9	13.1
50°-60°	92.2	13.1
60°-70°	87.9	12.5
70°-80°	78.0	11.1
80°-90°	62.0	8.8
90°-100°	44.5	6.3
100°-110°	26.1	3.7
110°-120°	8.3	1.2
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	127.5	18.2
0°-40°	210.9	30.0
0°-60°	394.9	56.3
0°-90°	622.8	88.7
90°-120°	79.0	11.3
90°-150°	79.0	11.3
90°-180°	79.0	11.3
0°-180°	701.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	162	162	162	162	162	
5°	179	175	165	149	140	17
15°	203	193	163	118	99	58
25°	237	213	154	83	54	109
35°	263	216	133	44	12	166
45°	304	212	109	13	0	225
55°	264	199	79	2	1	235
65°	236	181	49	3	2	236
75°	215	160	22	3	1	223
85°	177	127	5	3	1	148
90°	160	107	3	3	1	87
95°	139	88	3	3	1	109
105°	93	47	3	3	2	99
115°	45	12	3	4	1	34
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	162	162	162	162	162	162	162	162	162
2.5°	169	167	167	167	165	160	156	152	150
5°	179	176	175	170	165	156	149	142	140
7.5°	185	184	181	174	164	152	141	132	130
10°	191	190	186	178	164	147	133	124	120
12.5°	197	196	190	180	163	143	125	114	110
15°	203	200	193	182	163	137	118	105	99
17.5°	211	207	196	182	161	132	109	95	89
20°	220	216	201	181	159	126	101	84	77
22.5°	231	226	207	181	156	120	92	72	66
25°	237	233	213	181	154	114	83	61	54
27.5°	241	236	217	183	149	108	73	50	43
30°	244	235	215	184	145	101	64	39	31
32.5°	251	239	216	183	139	93	55	29	20
35°	263	248	216	180	133	85	44	19	12
37.5°	276	249	218	177	128	78	36	12	7
40°	281	248	217	173	122	69	27	7	6
42.5°	293	251	215	169	116	62	19	6	3
45°	304	249	212	166	109	53	13	3	0
47.5°	288	247	209	161	102	44	8	1	0
50°	270	245	206	156	94	37	7	1	0
52.5°	267	243	203	152	86	29	4	1	1
55°	264	240	199	147	79	22	2	2	1
57.5°	258	238	195	140	71	16	2	2	2
60°	248	236	191	133	64	12	3	3	2
62.5°	243	232	186	128	57	8	3	3	2
65°	236	226	181	121	49	6	3	3	2
67.5°	236	218	176	115	42	4	4	3	2
70°	227	212	173	108	35	3	4	2	2
72.5°	218	208	167	100	28	3	4	2	1
75°	215	203	160	92	22	3	3	2	1
77.5°	201	196	152	84	17	4	3	2	1
80°	192	185	144	75	12	4	3	2	1
82.5°	187	176	136	67	8	3	3	2	1
85°	177	166	127	58	5	3	3	2	1
87.5°	168	157	118	50	4	3	3	2	1
90°	160	150	107	42	3	3	3	2	1
92.5°	150	141	98	34	3	3	3	2	1
95°	139	132	88	27	3	3	3	2	1
97.5°	128	120	77	20	3	3	3	2	2
100°	117	108	66	15	3	3	3	2	2
102.5°	106	96	56	10	3	4	3	2	2
105°	93	83	47	7	3	4	3	2	2
107.5°	82	71	37	5	3	3	3	2	1
110°	69	60	28	4	3	3	3	2	1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	56	47	20	3	3	3	4	2	1
115°	45	35	12	3	3	3	4	2	1
117.5°	0	0	0	0	0	0	0	0	0
120°	0	0	0	0	0	0	0	0	0
122.5°	0	0	0	0	0	0	0	0	0
125°	0	0	0	0	0	0	0	0	0
127.5°	0	0	0	0	0	0	0	0	0
130°	0	0	0	0	0	0	0	0	0
132.5°	0	0	0	0	0	0	0	0	0
135°	0	0	0	0	0	0	0	0	0
137.5°	0	0	0	0	0	0	0	0	0
140°	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0

(END OF REPORT)