

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: P32776

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P32776
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-LO-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

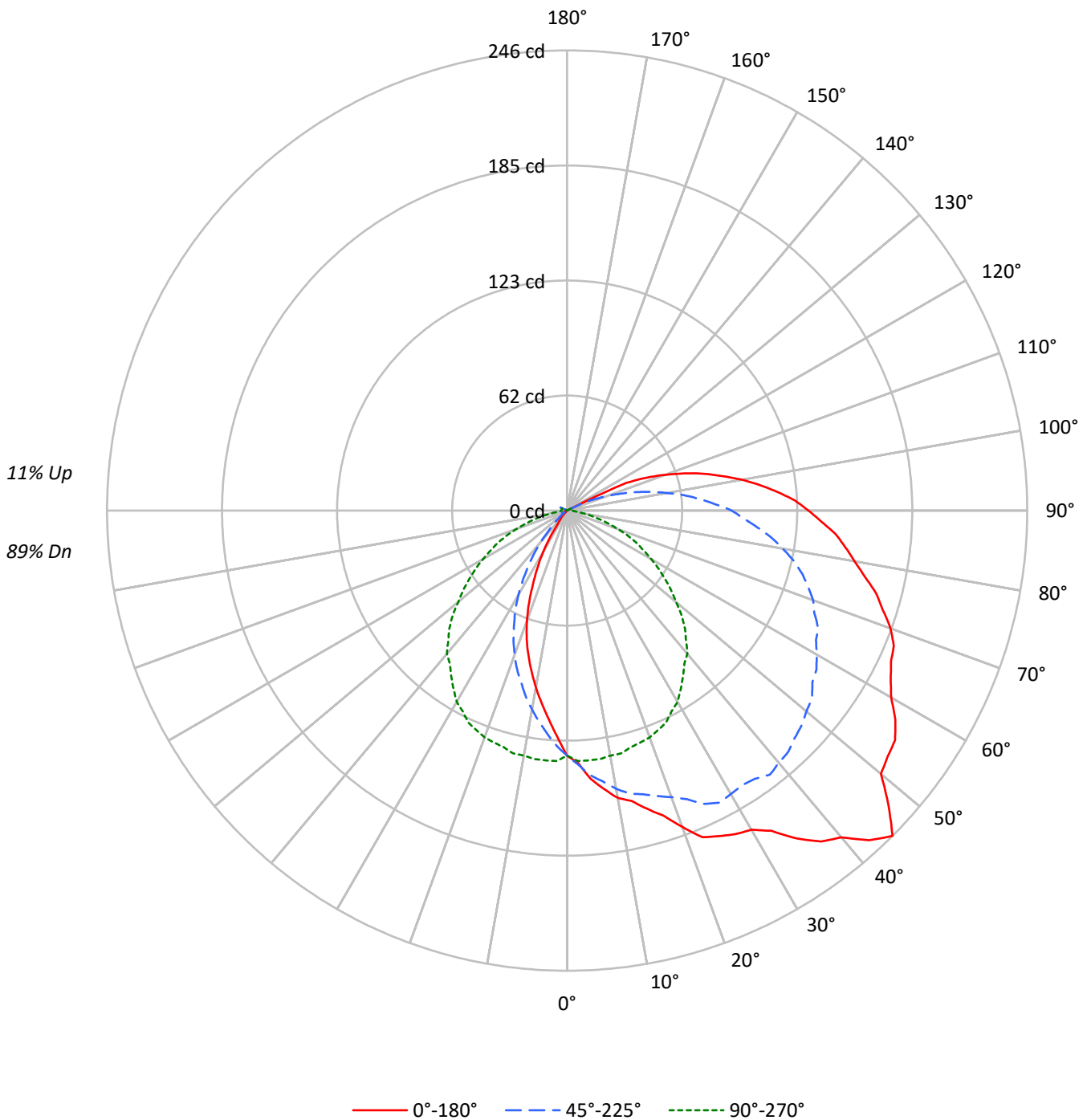
Lumens per Lamp: N/A
Luminaire Lumens: 569.8 lumens
Efficiency: N/A
Efficacy: 49.1 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.31 / 1.43
Luminous Opening: Rectangular (W 0.17' x L: 1.17' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 11.6
Input Voltage (V): NR
Input Current (Ain): 0.0996
Voltage Rise (V): NR
Power Factor: 0.9936
Total Harmonic Distortion (THDi): 20.7%
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	63	59	56	52
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	32	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°	7252	7252	7252
5°	8002	7446	6224
10°	8769	7476	5396
15°	9456	7508	4585
20°	10604	7599	3711
25°	11727	7635	2626
30°	12592	7543	1662
35°	14462	7298	608
40°	16476	7226	361
45°	19259	6968	0
50°	18860	6545	0
55°	20654	6177	97
60°	22143	5757	221
65°	25018	5370	262
70°	29781	4694	162
75°	36574	3850	214
80°	49731	2869	319
85°	91462	2541	635



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	12.4	2.2
10°-20°	35.8	6.3
20°-30°	55.3	9.7
30°-40°	67.8	11.9
40°-50°	74.5	13.1
50°-60°	74.7	13.1
60°-70°	71.3	12.5
70°-80°	63.2	11.1
80°-90°	50.3	8.8
90°-100°	36.3	6.4
100°-110°	21.4	3.8
110°-120°	6.9	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°	103.6	18.2
0°-40°	171.3	30.1
0°-60°	320.5	56.2
0°-90°	505.3	88.7
90°-120°	64.5	11.3
90°-150°	64.5	11.3
90°-180°	65.0	11.4
0°-180°	569.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	131	131	131	131	131	
5°	144	142	134	120	112	14
15°	165	157	131	95	80	47
25°	192	173	125	67	43	89
35°	214	175	108	36	9	134
45°	246	172	89	10	0	182
55°	214	160	64	2	1	190
65°	191	148	41	3	2	190
75°	171	130	18	3	1	180
85°	144	102	4	2	1	120
90°	129	88	3	2	1	71
95°	113	71	3	2	1	89
105°	76	38	3	3	1	80
115°	35	10	3	4	1	27
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°	131	131	131	131	131	131	131	131	131
2.5°	135	136	136	135	134	131	126	123	121
5°	144	143	142	138	134	127	120	115	112
7.5°	150	149	146	142	134	123	114	108	104
10°	156	154	151	144	133	120	108	100	96
12.5°	159	159	155	146	133	116	102	93	88
15°	165	163	157	148	131	112	95	85	80
17.5°	171	168	160	149	130	107	89	77	72
20°	180	175	163	147	129	103	82	69	63
22.5°	189	183	167	147	127	98	75	60	53
25°	192	189	173	147	125	93	67	50	43
27.5°	195	191	176	148	121	88	60	41	34
30°	197	191	175	150	118	83	52	32	26
32.5°	203	194	174	149	113	76	44	24	17
35°	214	201	175	148	108	69	36	16	9
37.5°	223	203	178	144	103	63	29	10	6
40°	228	202	176	140	100	56	22	6	5
42.5°	239	202	175	137	94	50	15	5	2
45°	246	203	172	134	89	43	10	3	0
47.5°	233	200	170	130	83	36	6	1	0
50°	219	199	167	126	76	30	5	1	0
52.5°	216	197	165	123	70	24	3	1	1
55°	214	194	160	119	64	18	2	1	1
57.5°	208	192	158	114	58	13	2	2	2
60°	200	191	154	109	52	10	2	2	2
62.5°	195	188	150	103	46	7	2	3	2
65°	191	183	148	98	41	5	3	2	2
67.5°	189	177	143	93	35	3	3	2	1
70°	184	173	140	87	29	3	3	2	1
72.5°	177	168	135	81	23	3	3	2	1
75°	171	164	130	74	18	3	3	2	1
77.5°	163	158	124	68	13	3	2	2	1
80°	156	151	117	61	9	3	2	2	1
82.5°	150	143	110	55	6	3	2	1	1
85°	144	135	102	48	4	3	2	2	1
87.5°	136	128	94	41	3	3	2	2	1
90°	129	121	88	34	3	3	2	2	1
92.5°	122	114	79	27	3	3	2	2	1
95°	113	106	71	22	3	3	2	2	1
97.5°	104	97	63	17	3	3	3	2	1
100°	95	88	54	12	3	3	3	2	1
102.5°	85	77	46	8	3	3	3	2	1
105°	76	68	38	6	3	3	3	2	1
107.5°	66	58	30	4	3	3	3	2	1
110°	56	48	23	3	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°	46	38	16	2	3	3	3	2	1
115°	35	28	10	2	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)