

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: P32772

Luminaire Tested: **FWLDL-D-2-LD3-UNV-STD-35-80/84-ED**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P32772
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FWLDL-D-2-LD3-UNV-STD-35-80/84-ED
Description: FAILSAFE FWLDL LED FIXTURE WITH .125" PATTERN 12 ACRYLIC LENS
& .125" POLYCARBONATE LENS
Light Source: (49) LG 3500K LED
1UT217049835
Ballast/Driver: (1) ADVANCE ELECTRONIC DRIVER
XIO25C100V036XPL1

Summary

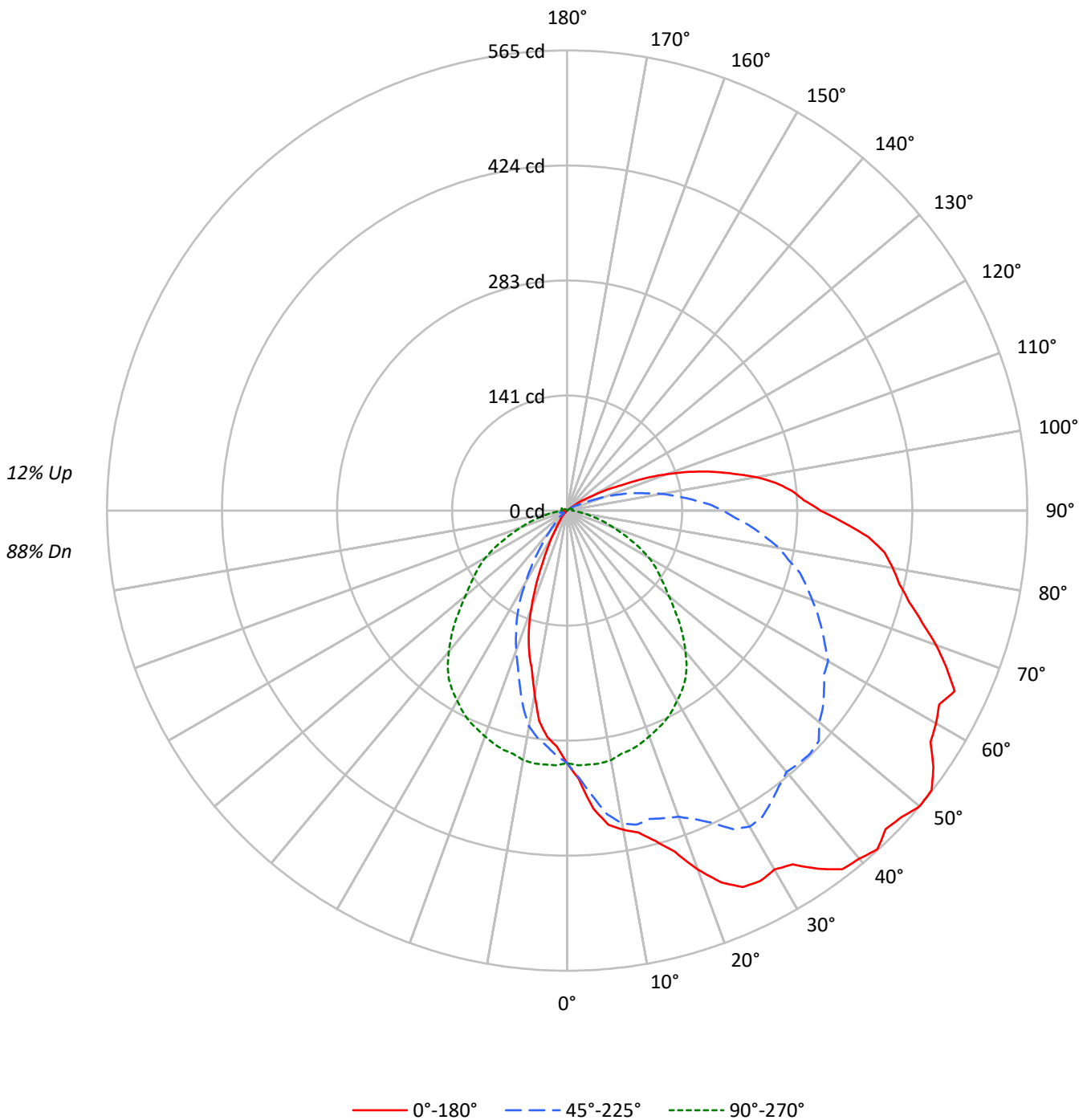
Lumens per Lamp: N/A
Luminaire Lumens: 1370.7 lumens
Efficiency: N/A
Efficacy: 68.5 lumens/watt
Spacing Criteria (0/90/45): 1.36 / 1.29 / 1.44
Luminous Opening: Rectangular (W 0.17' x L: 1.81' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 20
Input Voltage (V): NR
Input Current (Ain): 0.1685
Voltage Rise (V): NR
Power Factor: 0.9977
Total Harmonic Distortion (THDi): 15.2%
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	91	91	91	88
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	58	63	59	55	52
3	83	71	61	54	79	68	60	53	63	56	50	59	53	48	55	50	46	43
4	75	62	52	45	72	60	51	44	56	48	42	52	45	40	48	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	20	30	23	19	28	22	18	16

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	11046	11046	11046
5°	13127	11195	9979
10°	14400	11253	8286
15°	15493	11214	6640
20°	17784	11186	4929
25°	20051	11205	2870
30°	20943	11109	1481
35°	23359	11005	696
40°	25955	10512	465
45°	27867	9826	0
50°	31320	9036	111
55°	34105	8635	186
60°	37271	8267	214
65°	44264	7335	422
70°	50216	6251	521
75°	59887	5369	413
80°	83310	4514	616
85°	151677	4497	1227



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.6	2.2
10°-20°	87.2	6.4
20°-30°	132.2	9.6
30°-40°	160.4	11.7
40°-50°	177.1	12.9
50°-60°	181.0	13.2
60°-70°	173.0	12.6
70°-80°	150.9	11.0
80°-90°	119.7	8.7
90°-100°	83.7	6.1
100°-110°	49.8	3.6
110°-120°	20.1	1.5
120°-130°	5.0	0.4
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°	250.0	18.2
0°-40°	410.3	29.9
0°-60°	768.5	56.1
0°-90°	1212.0	88.4
90°-120°	153.6	11.2
90°-150°	158.7	11.6
90°-180°	159.0	11.6
0°-180°	1370.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	310	310	310	310	310	
5°	367	351	313	290	279	36
15°	420	392	304	224	180	121
25°	510	423	285	146	73	233
35°	537	437	253	63	16	337
45°	553	422	195	18	0	433
55°	549	385	139	5	3	490
65°	525	345	87	7	5	508
75°	435	296	39	9	3	464
85°	371	227	11	6	3	310
90°	311	191	7	6	3	172
95°	277	154	6	6	3	218
105°	184	82	7	7	4	195
115°	74	22	7	6	3	79
125°	18	5	7	6	2	15
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°	310	310	310	310	310	310	310	310	310
2.5°	330	332	328	322	313	307	301	293	290
5°	367	364	351	332	313	299	290	283	279
7.5°	389	389	376	345	313	290	281	269	261
10°	398	399	390	355	311	285	269	244	229
12.5°	405	407	395	367	306	277	248	213	200
15°	420	413	392	373	304	267	224	189	180
17.5°	439	428	396	373	300	258	201	170	157
20°	469	451	400	368	295	246	183	147	130
22.5°	494	476	410	360	290	233	164	119	101
25°	510	495	423	354	285	215	146	92	73
27.5°	513	503	441	342	278	202	126	67	52
30°	509	501	448	336	270	185	102	48	36
32.5°	515	494	446	333	262	168	82	34	23
35°	537	497	437	334	253	152	63	23	16
37.5°	555	514	427	336	241	135	46	17	13
40°	558	528	419	335	226	118	33	14	10
42.5°	564	529	421	329	211	102	24	10	4
45°	553	513	422	313	195	86	18	5	0
47.5°	557	502	419	296	178	71	15	2	0
50°	565	506	404	285	163	56	12	2	2
52.5°	564	512	396	276	150	45	7	3	3
55°	549	513	385	268	139	34	5	4	3
57.5°	529	499	374	257	128	26	5	5	3
60°	523	475	370	247	116	19	6	5	3
62.5°	515	465	357	230	102	14	7	6	4
65°	525	464	345	219	87	11	7	6	5
67.5°	504	459	333	205	73	8	7	7	5
70°	482	448	320	189	60	7	8	7	5
72.5°	457	430	308	178	50	7	8	7	4
75°	435	400	296	165	39	7	9	6	3
77.5°	418	378	278	150	29	7	8	5	3
80°	406	361	264	134	22	7	6	4	3
82.5°	393	355	245	119	15	7	6	4	3
85°	371	340	227	102	11	7	6	4	3
87.5°	340	317	207	88	8	7	6	4	3
90°	311	290	191	75	7	7	6	4	3
92.5°	291	264	175	61	6	7	6	4	3
95°	277	246	154	47	6	7	6	4	3
97.5°	259	230	135	36	6	7	7	5	4
100°	236	208	118	27	6	7	7	5	4
102.5°	209	183	98	19	6	7	7	5	4
105°	184	159	82	14	7	7	7	5	4
107.5°	158	135	65	11	7	7	7	5	4
110°	131	110	50	8	7	7	6	5	4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	104	85	33	6	7	7	6	4	3
115°	74	60	22	6	7	7	6	4	3
117.5°	55	42	15	6	7	7	6	4	3
120°	38	28	12	6	7	7	6	3	2
122.5°	26	20	9	6	7	7	6	3	2
125°	18	15	5	6	7	7	6	3	2
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)