

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: P32769

Luminaire Tested: **FWLDL-D-4-LD3-UNV-STD-35-80/84-ED**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P32769
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FWLDL-D-4-LD3-UNV-STD-35-80/84-ED
Description: FAILSAFE FWLDL LED FIXTURE WITH .125" PATTERN 12 ACRYLIC LENS
& .125" POLYCARBONATE LENS
Light Source: (98) LG 3500K LED
1UT217049835
Ballast/Driver: (1) LG ELECTRONIC DRIVER
LEDINTA2000C24DO

Summary

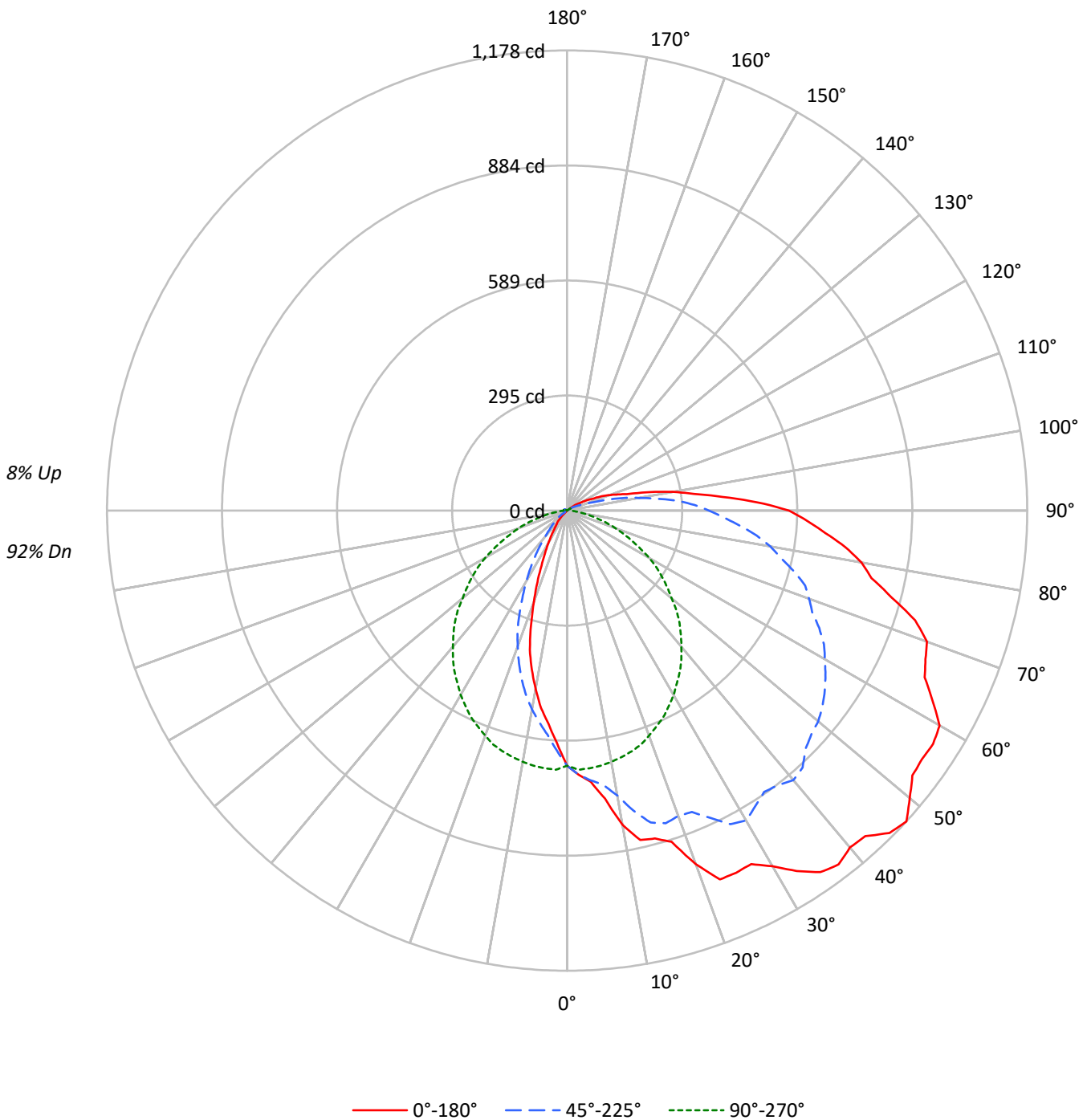
Lumens per Lamp: N/A
Luminaire Lumens: 2685.4 lumens
Efficiency: N/A
Efficacy: 69.9 lumens/watt
Spacing Criteria (0/90/45): 1.4 / 1.24 / 1.43
Luminous Opening: Rectangular (W 0.17' x L: 3.71' x H: 0')
CIE Type: Direct

Input Watts (W): 38.4
Input Voltage (V): NR
Input Current (Ain): 0.3215
Voltage Rise (V): NR
Power Factor: 0.9973
Total Harmonic Distortion (THDi): 6.16%
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	117	117	117	117	113	113	113	113	107	107	107	100	100	100	95	95	95	92
1	103	97	91	86	100	94	89	84	88	84	80	83	79	76	78	75	72	69
2	93	83	74	67	89	80	72	66	75	69	63	70	65	60	66	62	58	55
3	84	71	62	55	80	69	60	53	65	58	51	61	55	49	57	52	48	45
4	76	63	53	45	73	61	52	45	57	49	43	54	47	41	50	45	40	37
5	70	56	46	38	67	54	45	38	51	43	37	48	41	35	45	39	34	32
6	64	50	40	33	62	48	39	33	46	38	32	43	36	31	41	35	30	27
7	59	45	36	29	57	44	35	29	41	33	28	39	32	27	37	31	26	24
8	55	41	32	26	53	40	31	25	38	30	25	36	29	24	34	28	23	21
9	51	37	29	23	50	36	28	23	35	27	22	33	26	22	31	25	21	19
10	48	34	26	21	46	34	26	20	32	25	20	30	24	19	29	23	19	17

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	11372	11372	11372
5°	12185	11573	9580
10°	14448	11548	8206
15°	15668	11503	6653
20°	17848	11361	4615
25°	19658	11203	2979
30°	21136	10960	1910
35°	24025	10694	1169
40°	25599	10344	841
45°	28743	10024	123
50°	31023	9456	0
55°	33673	9018	91
60°	38349	8464	35
65°	41621	7541	82
70°	49902	6721	153
75°	57869	5585	202
80°	76724	4413	100
85°	132683	3797	200



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.0	2.3
10°-20°	176.8	6.6
20°-30°	270.1	10.1
30°-40°	334.2	12.4
40°-50°	370.0	13.8
50°-60°	375.0	14.0
60°-70°	353.6	13.2
70°-80°	301.9	11.2
80°-90°	224.3	8.4
90°-100°	135.3	5.0
100°-110°	56.0	2.1
110°-120°	21.1	0.8
120°-130°	6.2	0.2
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°	507.9	18.9
0°-40°	842.1	31.4
0°-60°	1587.1	59.1
0°-90°	2466.8	91.9
90°-120°	212.4	7.9
90°-150°	218.6	8.1
90°-180°	219.0	8.2
0°-180°	2685.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	653	653	653	653	653	
5°	697	693	662	576	548	70
15°	869	827	638	448	369	250
25°	1023	868	583	287	155	472
35°	1130	879	503	143	55	701
45°	1167	863	407	55	5	893
55°	1109	805	297	10	3	999
65°	1010	712	183	8	2	1016
75°	860	601	83	10	3	915
85°	664	444	19	8	1	565
90°	568	363	9	8	1	307
95°	400	285	9	8	1	302
105°	164	107	9	8	2	190
115°	72	28	9	7	1	76
125°	24	5	9	6	0	17
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°	653	653	653	653	653	653	653	653	653
2.5°	677	681	677	675	664	641	614	602	596
5°	697	699	693	688	662	617	576	557	548
7.5°	744	736	708	694	659	593	546	523	510
10°	817	801	741	697	653	571	517	480	464
12.5°	864	857	787	701	646	551	485	439	417
15°	869	869	827	710	638	530	448	389	369
17.5°	889	874	839	723	628	508	410	338	307
20°	963	915	832	739	613	483	370	282	249
22.5°	1022	982	835	750	598	457	331	231	199
25°	1023	1013	868	750	583	429	287	190	155
27.5°	1020	1002	905	736	564	401	245	146	122
30°	1051	1005	916	717	545	370	208	117	95
32.5°	1094	1039	897	698	523	344	175	93	74
35°	1130	1070	879	691	503	313	143	71	55
37.5°	1142	1074	886	689	480	284	114	55	44
40°	1126	1069	901	679	455	253	89	44	37
42.5°	1130	1063	892	659	431	221	69	38	26
45°	1167	1060	863	633	407	190	55	26	5
47.5°	1178	1063	848	617	380	161	44	6	0
50°	1145	1063	839	601	349	135	38	1	0
52.5°	1114	1053	824	580	323	108	28	3	2
55°	1109	1019	805	560	297	86	10	4	3
57.5°	1111	996	784	535	271	66	6	5	2
60°	1101	999	762	508	243	50	7	5	1
62.5°	1055	994	741	479	212	38	8	5	2
65°	1010	953	712	452	183	31	8	5	2
67.5°	993	905	679	428	156	23	8	6	2
70°	980	878	659	400	132	10	8	6	3
72.5°	934	859	639	369	107	10	9	6	3
75°	860	816	601	338	83	11	10	6	3
77.5°	798	753	560	306	63	11	10	5	2
80°	765	701	528	272	44	11	9	4	1
82.5°	719	665	489	239	29	11	9	4	1
85°	664	621	444	205	19	10	8	3	1
87.5°	616	571	400	172	12	10	8	3	1
90°	568	527	363	139	9	10	8	3	1
92.5°	487	470	326	110	9	10	8	4	1
95°	400	386	285	83	9	10	8	4	1
97.5°	327	311	231	59	9	10	8	4	2
100°	275	262	187	43	9	10	8	4	2
102.5°	218	208	149	27	9	10	8	4	2
105°	164	156	107	19	9	10	8	4	2
107.5°	137	123	72	16	9	10	8	4	2
110°	116	102	52	9	9	10	7	4	1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	96	79	37	8	9	9	7	3	1
115°	72	61	28	8	9	9	7	3	1
117.5°	58	46	22	9	9	9	7	3	1
120°	42	33	19	8	9	9	7	2	0
122.5°	31	26	11	9	9	9	6	2	0
125°	24	21	5	9	9	9	6	2	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)