

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: P32761

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

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P32761
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FWL-D-2-LD3-UNV-STD/STD-35-80/84-ED
Description: FAILSAFE FWL 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

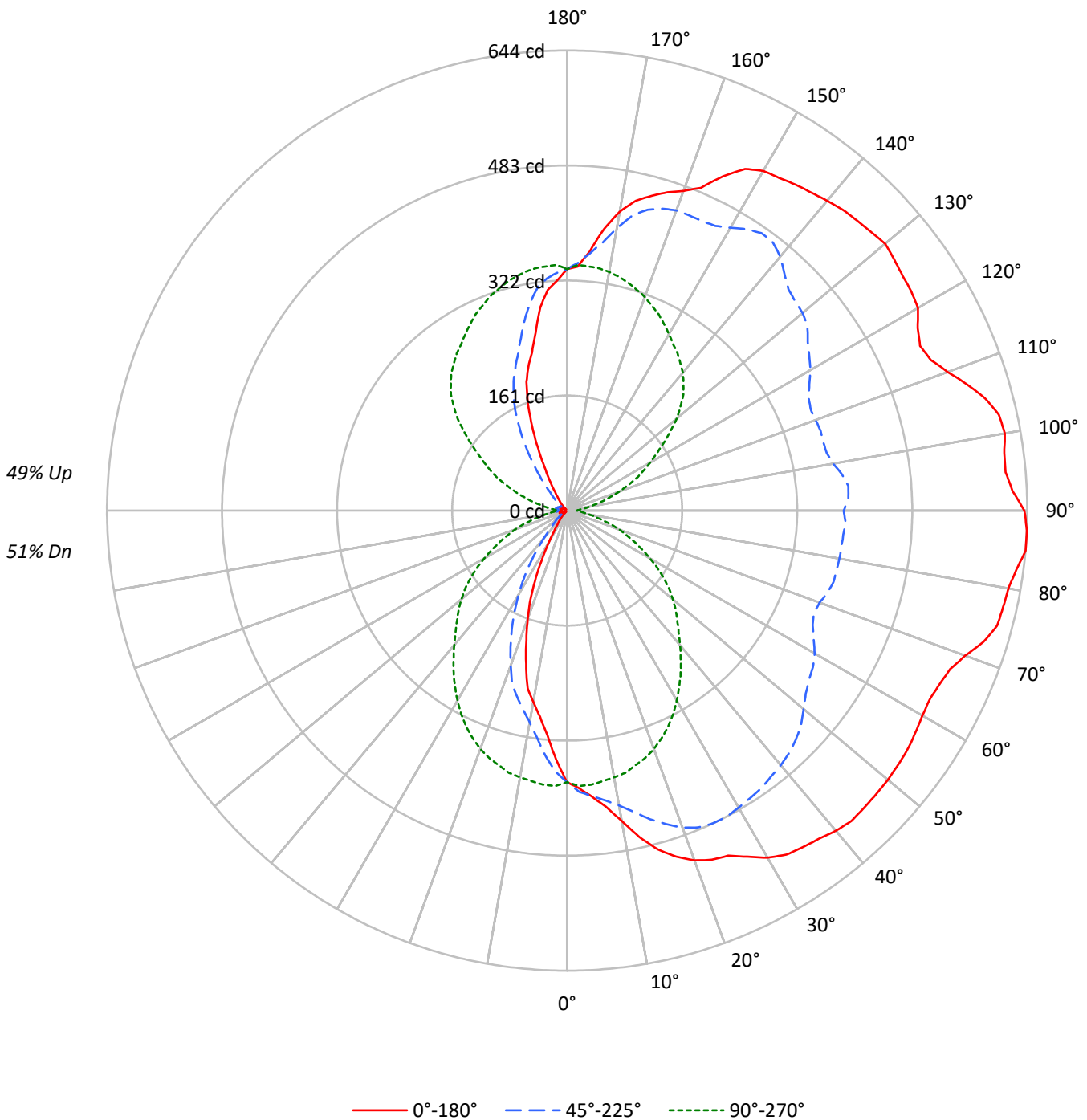
Lumens per Lamp: N/A
Luminaire Lumens: 2893.4 lumens
Efficiency: N/A
Efficacy: 75.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.2 / 1.36
Luminous Opening: Rectangular (W 0.17' x L: 1.81' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 38.1
Input Voltage (V): NR
Input Current (Ain): 0.3189
Voltage Rise (V): NR
Power Factor: 0.9973
Total Harmonic Distortion (THDi): 6.1%
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	50	30	10	0	
RCR																						
0	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51				51
1	95	89	84	79	87	82	77	73	69	65	62	56	54	52	45	43	42	36				36
2	85	76	69	63	78	70	64	58	59	54	49	48	44	41	38	35	33	28				28
3	77	66	58	51	70	61	54	48	51	45	40	42	37	34	33	30	27	23				23
4	70	58	49	43	64	54	46	40	45	39	34	37	32	28	29	26	23	19				19
5	64	52	43	36	59	48	40	34	40	34	29	33	28	24	26	23	20	16				16
6	59	46	37	31	54	43	35	29	36	30	25	30	25	21	24	20	17	14				14
7	55	42	33	27	50	38	31	25	32	26	22	27	22	18	22	18	15	12				12
8	51	38	29	24	46	35	27	22	30	24	19	25	20	16	20	16	13	11				11
9	47	34	26	21	43	32	25	20	27	21	17	23	18	15	18	15	12	10				10
10	44	31	24	19	40	29	22	18	25	19	15	21	16	13	17	13	11	9				9

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	13540	13540	13540
5°	14379	13771	11303
10°	15956	13713	9841
15°	18113	13612	8189
20°	19756	13461	6105
25°	20955	13131	4050
30°	23082	12631	2057
35°	25012	12049	1000
40°	27211	11443	605
45°	29630	10985	101
50°	32484	10699	166
55°	36155	10250	248
60°	40906	9549	356
65°	48480	8769	759
70°	61780	8022	1146
75°	85770	6884	1514
80°	128659	6361	2052
85°	263289	7768	3271



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.3	1.2
10°-20°	101.2	3.5
20°-30°	150.9	5.2
30°-40°	179.6	6.2
40°-50°	193.4	6.7
50°-60°	197.8	6.8
60°-70°	197.2	6.8
70°-80°	203.4	7.0
80°-90°	205.5	7.1
90°-100°	202.1	7.0
100°-110°	198.7	6.9
110°-120°	193.3	6.7
120°-130°	196.2	6.8
130°-140°	191.7	6.6
140°-150°	174.8	6.0
150°-160°	144.1	5.0
160°-170°	95.4	3.3
170°-180°	32.7	1.1
0°-30°	287.4	9.9
0°-40°	467.0	16.1
0°-60°	858.2	29.7
0°-90°	1464.3	50.6
90°-120°	594.1	20.5
90°-150°	1156.8	40.0
90°-180°	1429.0	49.4
0°-180°	2893.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	380	380	380	380	380	
5°	402	401	385	345	316	40
15°	491	447	369	270	222	139
25°	533	483	334	183	103	249
35°	575	474	277	90	23	361
45°	588	453	218	27	2	455
55°	582	413	165	10	4	521
65°	575	379	104	12	9	573
75°	623	386	50	16	11	653
85°	644	388	19	14	8	521
90°	640	387	14	13	7	349
95°	616	395	19	12	7	505
105°	606	371	52	15	10	637
115°	545	373	107	12	9	550
125°	573	411	165	10	4	515
135°	574	438	230	28	2	445
145°	557	474	269	88	23	350
155°	516	447	303	177	96	239
165°	456	436	330	250	209	130
175°	364	361	343	326	310	37
180°	338	338	338	338	338	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	380	380	380	380	380	380	380	380	380
2.5°	389	390	394	392	386	375	366	355	349
5°	402	400	401	398	385	364	345	326	316
7.5°	418	415	409	400	382	352	321	300	291
10°	441	435	419	402	379	338	301	281	272
12.5°	468	457	432	403	376	323	285	265	255
15°	491	479	447	404	369	309	270	240	222
17.5°	508	497	460	404	363	294	255	209	190
20°	521	509	472	404	355	279	231	178	161
22.5°	529	518	480	405	345	265	207	154	134
25°	533	522	483	405	334	250	183	126	103
27.5°	546	526	483	404	321	234	159	98	74
30°	561	535	480	401	307	220	136	71	50
32.5°	571	546	477	394	292	202	113	50	34
35°	575	551	474	385	277	184	90	33	23
37.5°	579	549	469	374	261	166	69	24	17
40°	585	547	465	361	246	147	50	19	13
42.5°	589	547	460	349	231	128	37	16	6
45°	588	546	453	338	218	111	27	9	2
47.5°	587	543	444	328	206	93	22	5	2
50°	586	540	432	319	193	78	19	6	3
52.5°	584	536	421	307	180	61	13	6	3
55°	582	530	413	296	165	48	10	6	4
57.5°	578	526	408	283	150	38	10	6	4
60°	574	524	400	269	134	29	11	7	5
62.5°	572	525	389	255	118	23	11	8	6
65°	575	527	379	241	104	20	12	10	9
67.5°	580	529	374	228	90	15	12	12	10
70°	593	536	376	214	77	13	13	13	11
72.5°	611	548	382	202	64	13	15	14	11
75°	623	559	386	188	50	14	16	14	11
77.5°	625	564	386	177	40	14	17	14	11
80°	627	568	387	169	31	14	17	13	10
82.5°	634	576	387	162	24	14	16	11	9
85°	644	582	388	158	19	14	14	10	8
87.5°	644	580	390	155	15	14	13	9	7
90°	640	574	387	152	14	14	13	9	7
92.5°	624	559	394	154	16	14	12	8	7
95°	616	556	395	157	19	14	12	9	7
97.5°	617	563	388	161	25	14	14	10	8
100°	622	570	378	166	32	14	15	12	9
102.5°	619	562	372	174	41	14	16	13	10
105°	606	545	371	185	52	13	15	14	10
107.5°	587	526	372	200	64	13	14	13	10
110°	567	509	370	214	77	13	14	13	10



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	551	501	369	230	91	16	12	12	10
115°	545	506	373	243	107	20	12	11	9
117.5°	553	519	382	255	120	23	11	9	7
120°	567	526	393	266	134	30	11	8	5
122.5°	571	523	402	278	148	38	10	7	5
125°	573	520	411	291	165	49	10	6	4
127.5°	577	524	424	305	182	63	15	6	4
130°	581	530	430	319	200	77	19	5	3
132.5°	577	536	433	332	215	94	22	5	2
135°	574	539	438	340	230	111	28	11	2
137.5°	571	534	450	341	241	129	37	16	9
140°	566	530	464	343	252	147	51	19	14
142.5°	561	530	473	349	260	163	68	24	17
145°	557	535	474	360	269	181	88	34	23
147.5°	552	539	467	372	276	198	110	49	33
150°	549	534	457	385	285	216	133	66	49
152.5°	539	515	449	395	294	232	157	90	68
155°	516	493	447	402	303	249	177	121	96
157.5°	489	479	447	401	310	265	196	151	128
160°	476	471	447	398	318	281	212	178	161
162.5°	467	463	443	389	324	294	229	200	189
165°	456	454	436	380	330	307	250	217	209
167.5°	444	443	423	371	335	318	274	237	227
170°	425	422	401	363	339	327	296	265	253
172.5°	398	394	378	357	342	333	315	295	287
175°	364	366	361	350	343	337	326	315	310
177.5°	342	345	347	346	344	341	333	325	322
180°	338	338	338	338	338	338	338	338	338

(END OF REPORT)