

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: 01286

Luminaire Tested: **FLRW-80**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: 01286
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FLRW-80
Description: FORMED STEEL HOUSING, WHITE ENAMEL REFLECTOR, CLEAR
PLASTIC LENS
Light Source: TWO F40T12/CW RATED 3150 LUMENS
Ballast/Driver: MAGNETEK 446-L-VLH-TC-P

Summary

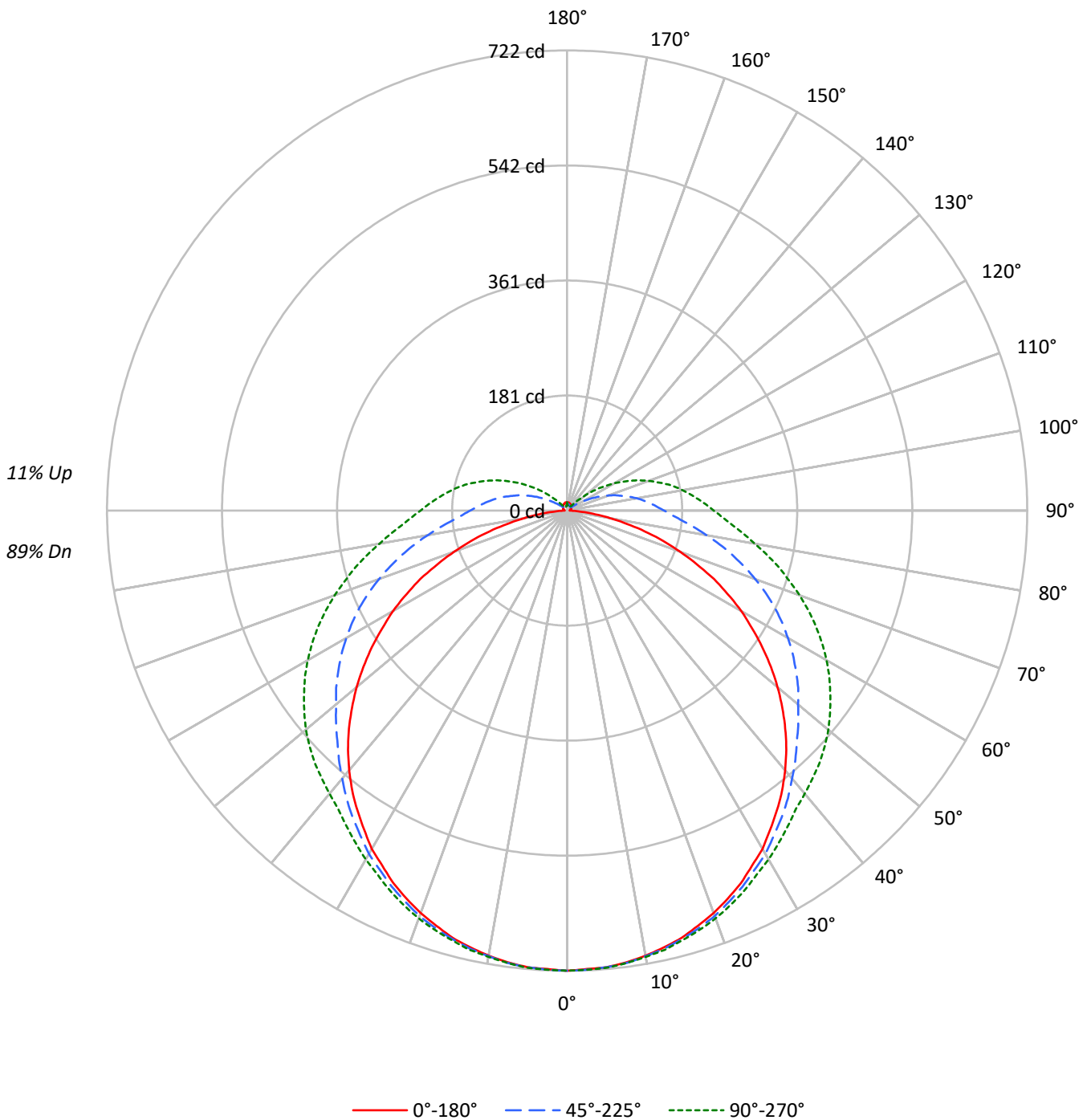
Lumens per Lamp: 3150 (2 lamps)
Luminaire Lumens: 2838.0 lumens
Efficiency: 45.0%
Efficacy: 33.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.89' x L: 4.42' x H: 0.29')
CIE Type: Semi-Direct

Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
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										
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	50	30	10	0														
RCR																																						
0	52	52	52	52	51	51	51	51	47	47	47	44	44	44	41	41	41	40																				
1	47	44	42	40	45	43	40	39	40	38	36	37	36	34	35	33	32	31																				
2	42	38	34	31	40	36	33	31	34	31	29	32	30	28	30	28	26	25																				
3	38	33	29	26	36	32	28	25	30	27	24	28	25	23	26	24	22	21																				
4	35	29	25	21	33	28	24	21	26	23	20	24	22	19	23	20	19	17																				
5	32	26	21	18	30	25	21	18	23	20	17	22	19	17	21	18	16	15																				
6	29	23	19	16	28	22	18	15	21	18	15	20	17	14	19	16	14	13																				
7	27	21	17	14	26	20	16	14	19	16	13	18	15	13	17	14	12	11																				
8	25	19	15	12	24	18	15	12	17	14	12	16	13	11	15	13	11	10																				
9	23	17	13	11	23	17	13	11	16	13	10	15	12	10	14	12	10	9																				
10	22	16	12	10	21	16	12	10	15	12	9	14	11	9	13	11	9	8																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1976	1976	1976
5°	1964	1928	1923
10°	1947	1881	1868
15°	1932	1835	1819
20°	1911	1791	1773
25°	1890	1741	1725
30°	1866	1694	1681
35°	1833	1642	1643
40°	1801	1591	1627
45°	1758	1546	1634
50°	1702	1514	1640
55°	1631	1498	1641
60°	1553	1480	1644
65°	1442	1459	1643
70°	1274	1427	1638
75°	1070	1394	1641
80°	792	1361	1654
85°	413	1365	1728



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	68.4	2.4	1.1	0°	722	722	722	722	722	
10°-20°	196.6	6.9	3.1	5°	719	720	719	719	720	68
20°-30°	300.3	10.6	4.8	15°	694	695	696	698	698	196
30°-40°	368.4	13.0	5.8	25°	645	648	651	656	658	297
40°-50°	399.2	14.1	6.3	35°	574	579	587	598	604	359
50°-60°	392.0	13.8	6.2	45°	484	491	510	544	560	373
60°-70°	345.6	12.2	5.5	55°	374	388	438	488	504	334
70°-80°	267.7	9.4	4.2	65°	254	283	359	411	431	250
80°-90°	182.7	6.4	2.9	75°	126	187	268	324	344	134
90°-100°	129.8	4.6	2.1	85°	23	97	181	239	260	29
100°-110°	89.2	3.1	1.4	90°	5	70	152	210	230	3
110°-120°	52.2	1.8	0.8	95°	4	53	131	186	206	4
120°-130°	24.0	0.8	0.4	105°	6	21	89	142	161	6
130°-140°	8.8	0.3	0.1	115°	6	7	49	94	111	6
140°-150°	5.2	0.2	0.1	125°	8	7	16	47	61	7
150°-160°	4.0	0.1	0.1	135°	9	8	8	13	19	7
160°-170°	2.7	0.1	0.0	145°	10	8	8	8	8	7
170°-180°	1.0	0.0	0.0	155°	11	9	8	8	6	5
0°-30°	565.3	19.9	9.0	165°	12	11	9	8	7	3
0°-40°	933.7	32.9	14.8	175°	13	12	11	9	8	1
0°-60°	1725.0	60.8	27.4	180°	13	13	13	13	13	
0°-90°	2520.9	88.8	40.0							
90°-120°	271.3	9.6	4.3							
90°-150°	309.3	10.9	4.9							
90°-180°	317.0	11.2	5.0							
0°-180°	2838.0	100.0	45.0							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	722	722	722	722	722
2.5°	720	721	721	720	721
5°	719	720	719	719	720
7.5°	715	716	716	716	716
10°	709	710	710	711	711
12.5°	702	703	704	705	706
15°	694	695	696	698	698
17.5°	683	685	687	690	690
20°	672	674	677	680	681
22.5°	659	661	664	668	670
25°	645	648	651	656	658
27.5°	628	632	636	641	644
30°	613	616	622	629	632
32.5°	593	598	604	613	618
35°	574	579	587	598	604
37.5°	554	558	569	583	590
40°	532	537	549	569	580
42.5°	509	515	530	557	570
45°	484	491	510	544	560
47.5°	458	466	492	532	548
50°	431	441	473	518	535
52.5°	403	414	457	504	520
55°	374	388	438	488	504
57.5°	344	361	420	470	488
60°	316	335	400	451	470
62.5°	284	309	380	433	451
65°	254	283	359	411	431
67.5°	220	259	337	391	410
70°	188	235	314	369	388
72.5°	158	210	291	346	365
75°	126	187	268	324	344
77.5°	96	162	245	301	321
80°	69	139	222	279	299
82.5°	45	117	201	259	279
85°	23	97	181	239	260
87.5°	9	82	165	223	244
90°	5	70	152	210	230
92.5°	4	61	141	197	218
95°	4	53	131	186	206
97.5°	5	44	121	175	195
100°	5	36	111	165	184
102.5°	6	29	100	153	173
105°	6	21	89	142	161
107.5°	6	16	80	130	148
110°	6	11	69	118	136



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	6	8	59	106	124
115°	6	7	49	94	111
117.5°	7	7	39	82	98
120°	7	7	30	71	86
122.5°	7	7	22	59	73
125°	8	7	16	47	61
127.5°	8	7	11	36	49
130°	8	7	9	27	38
132.5°	8	7	8	18	26
135°	9	8	8	13	19
137.5°	10	8	8	10	11
140°	10	8	8	8	9
142.5°	10	8	8	8	8
145°	10	8	8	8	8
147.5°	11	9	8	8	7
150°	11	9	8	8	7
152.5°	11	9	8	8	7
155°	11	9	8	8	6
157.5°	12	11	9	8	6
160°	12	11	9	8	6
162.5°	12	11	9	8	6
165°	12	11	9	8	7
167.5°	13	12	10	9	7
170°	13	12	10	9	8
172.5°	13	12	11	9	8
175°	13	12	11	9	8
177.5°	13	12	11	9	9
180°	13	13	13	13	13

(END OF REPORT)