

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: 3815

Luminaire Tested: **FWSCR-440-120**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 3815
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: FWSCR-440-120
Description: FAIL-SAFE SURFACE MOUNT
Light Source: F40T12/RS/CW 3150 LUMENS
Ballast/Driver: -

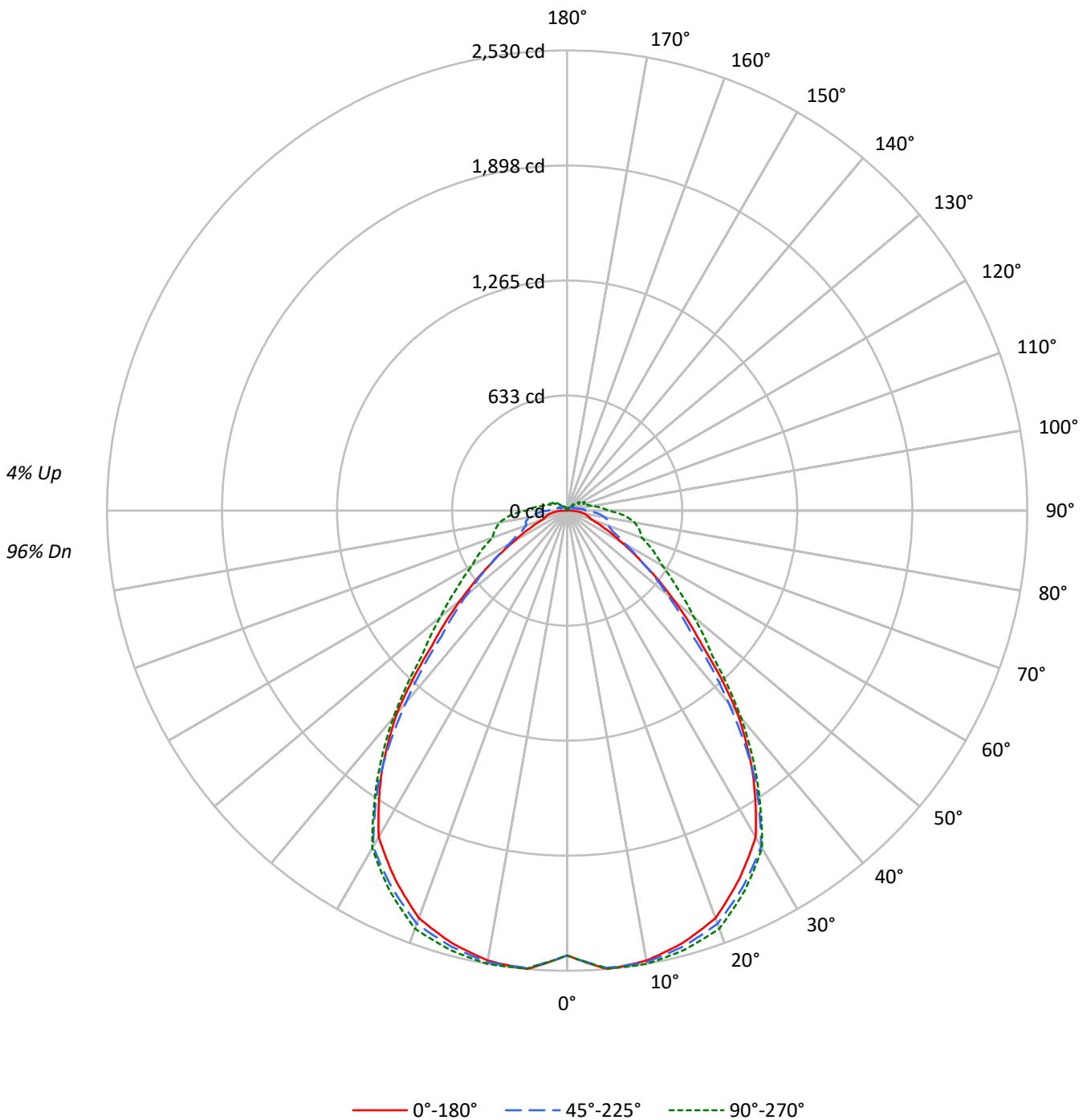
Summary

Lumens per Lamp: 3150 (4 lamps)
Luminaire Lumens: 5288.5 lumens
Efficiency: 42.0%
Efficacy: 26.8 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.25 / 1.18
Luminous Opening: Rectangular w/ Sides (W: 0.66' x L: 4' x H: 0.25')
CIE Type: Direct

Input Watts (W): 197
Input Voltage (V): NR
Input Current (A_{in}): 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				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	50	50	50	50	48	48	48	48	46	46	46	43	43	43	41	41	41	40
1	46	44	42	40	44	43	41	40	40	39	38	38	37	37	37	36	35	34
2	42	39	36	34	41	38	36	34	36	34	32	35	33	31	33	32	31	30
3	39	35	32	29	38	34	31	29	33	30	28	31	29	27	30	28	27	26
4	36	31	28	26	35	31	28	25	29	27	25	28	26	24	27	25	24	23
5	33	29	25	23	32	28	25	22	27	24	22	26	23	22	25	23	21	20
6	31	26	23	20	30	26	22	20	25	22	20	24	21	19	23	21	19	18
7	29	24	21	18	28	23	20	18	23	20	18	22	19	18	21	19	17	17
8	27	22	19	16	26	22	19	16	21	18	16	20	18	16	20	17	16	15
9	26	20	17	15	25	20	17	15	19	17	15	19	16	15	18	16	14	14
10	24	19	16	14	23	19	16	14	18	15	14	18	15	13	17	15	13	13

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9973	9973	9973
5°	10299	10056	10011
10°	10287	9889	9819
15°	10213	9657	9576
20°	10114	9418	9327
25°	9779	8970	8821
30°	9415	8509	8279
35°	8507	7365	7180
40°	7379	5825	6014
45°	5704	4298	4713
50°	4510	3324	3973
55°	3361	2532	3391
60°	2465	1948	2969
65°	1872	1618	2773
70°	1424	1534	2553
75°	1507	1718	2682
80°	1630	1780	2812
85°	1665	1711	2783



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	239.6	4.5	1.9	0°	2446	2446	2446	2446	2446	
10°-20°	694.5	13.1	5.5	5°	2530	2521	2524	2525	2527	240
20°-30°	1026.3	19.4	8.1	15°	2460	2460	2479	2437	2499	694
30°-40°	1063.7	20.1	8.4	25°	2237	2254	2284	2149	2307	1030
40°-50°	771.8	14.6	6.1	35°	1784	1804	1803	1470	1825	1109
50°-60°	498.2	9.4	4.0	45°	1051	995	978	828	1127	831
60°-70°	330.3	6.2	2.6	55°	515	486	515	548	735	475
70°-80°	257.7	4.9	2.0	65°	220	229	280	419	521	226
80°-90°	171.0	3.2	1.4	75°	118	144	236	342	411	124
90°-100°	85.1	1.6	0.7	85°	61	70	167	211	317	55
100°-110°	53.7	1.0	0.4	90°	0	16	103	167	226	8
110°-120°	40.7	0.8	0.3	95°	0	0	87	125	186	0
120°-130°	25.7	0.5	0.2	105°	0	0	52	85	118	0
130°-140°	13.2	0.2	0.1	115°	0	0	48	66	108	0
140°-150°	7.8	0.1	0.1	125°	0	0	43	36	82	0
150°-160°	5.9	0.1	0.0	135°	0	0	27	21	50	0
160°-170°	2.9	0.1	0.0	145°	0	1	12	26	26	0
170°-180°	0.3	0.0	0.0	155°	0	8	14	26	15	0
0°-30°	1960.4	37.1	15.6	165°	0	6	13	18	11	0
0°-40°	3024.2	57.2	24.0	175°	0	4	0	0	0	0
0°-60°	4294.2	81.2	34.1	180°	0	0	0	0	0	0
0°-90°	5053.1	95.6	40.1							
90°-120°	179.5	3.4	1.4							
90°-150°	226.2	4.3	1.8							
90°-180°	235.0	4.4	1.9							
0°-180°	5288.5	100.0	42.0							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2446	2446	2446	2446	2446
5°	2530	2521	2524	2525	2527
10°	2512	2513	2520	2494	2530
15°	2460	2460	2479	2437	2499
20°	2384	2387	2417	2307	2446
25°	2237	2254	2284	2149	2307
30°	2072	2103	2133	1818	2143
35°	1784	1804	1803	1470	1825
40°	1459	1418	1381	1071	1489
45°	1051	995	978	828	1127
50°	764	715	719	657	909
55°	515	486	515	548	735
60°	335	328	368	483	603
65°	220	229	280	419	521
70°	140	168	239	395	437
75°	118	144	236	342	411
80°	94	99	210	292	377
85°	61	70	167	211	317
90°	0	16	103	167	226
95°	0	0	87	125	186
100°	0	0	60	108	141
105°	0	0	52	85	118
110°	0	0	34	99	95
115°	0	0	48	66	108
120°	0	0	29	73	73
125°	0	0	43	36	82
130°	0	0	16	39	45
135°	0	0	27	21	50
140°	0	0	11	23	28
145°	0	1	12	26	26
150°	0	4	14	17	25
155°	0	8	14	26	15
160°	0	4	13	21	18
165°	0	6	13	18	11
170°	0	1	9	13	12
175°	0	4	0	0	0
180°	0	0	0	0	0

(END OF REPORT)