

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: 6755.0

Luminaire Tested: **FUS-X12-213-120-80/89-SSE**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: 6755.0  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FUS-X12-213-120-80/89-SSE  
Description: FAIL-SAFE SURFACE MOUNT SECURITY LUMINAIRE  
CLR .125 POLYCARB W/PRISM LENS WATTS=37  
Light Source: 2/13W PL  
90% REFL  
F13TT/27K  
Ballast/Driver: -

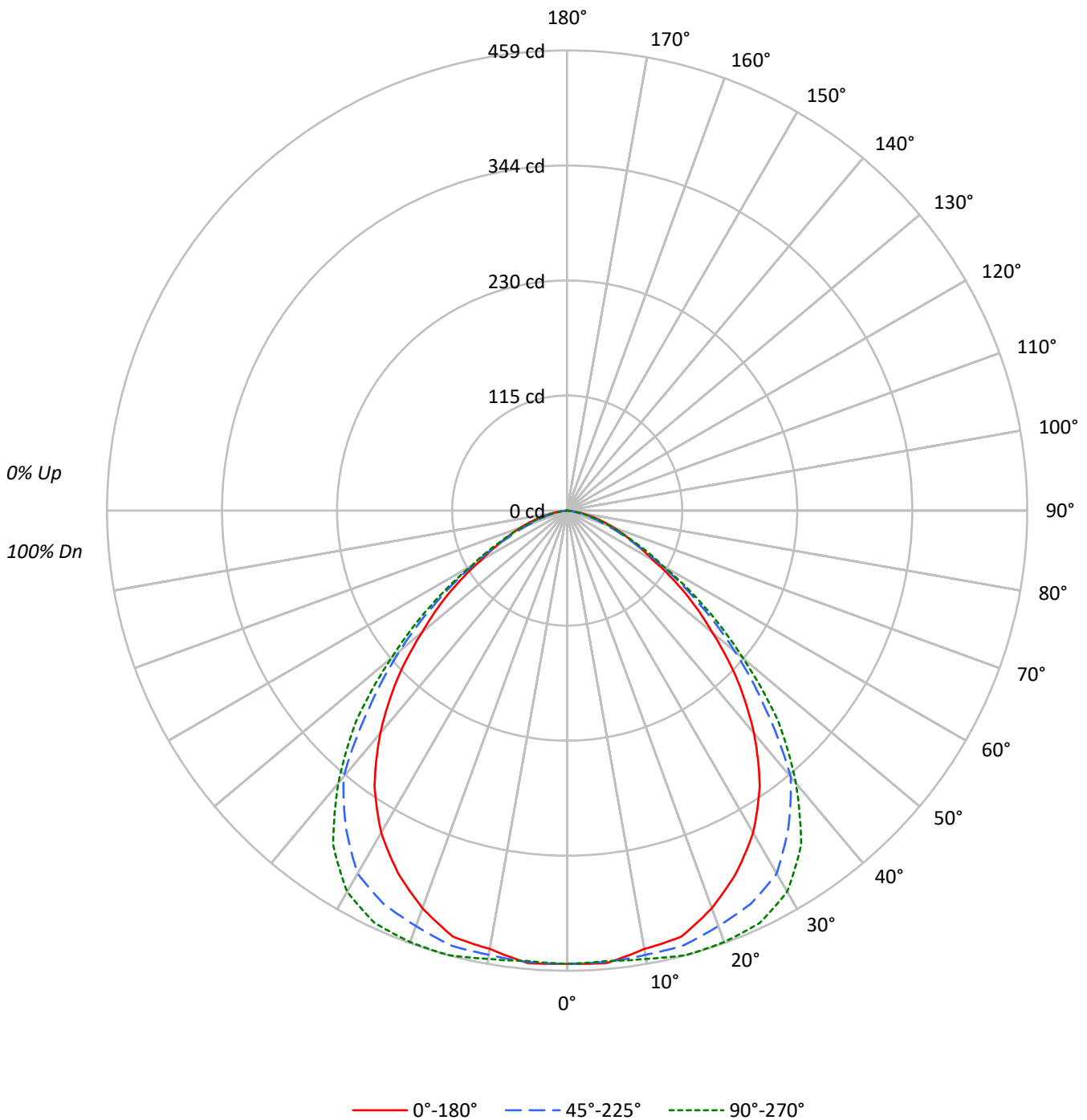
**Summary**

Lumens per Lamp: 900 (2 lamps)  
Luminaire Lumens: 1060.2 lumens  
Efficiency: 58.9%  
Efficacy: 28.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.39 / 1.35  
Luminous Opening: Rectangular (W 0.57' x L: 0.75' x H: 0')  
CIE Type: Direct

Input Watts (W): 37  
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	70	70	70	70	68	68	68	68	65	65	65	63	63	63	60	60	60	60	60	60	60	60	60	59														
1	65	63	61	59	64	62	60	58	59	58	56	57	56	55	55	54	53	55	54	53	55	54	53	52														
2	60	56	53	50	59	55	52	49	53	50	48	51	49	47	49	48	46	49	48	46	49	48	46	45														
3	56	50	46	43	54	49	45	42	48	44	42	46	43	41	45	42	40	45	42	40	45	42	40	39														
4	51	45	40	37	50	44	40	37	43	39	36	42	38	36	40	38	35	40	38	35	40	38	35	34														
5	47	41	36	32	46	40	36	32	39	35	32	38	34	31	37	34	31	37	34	31	37	34	31	30														
6	44	37	32	29	43	36	32	28	35	31	28	34	31	28	33	30	28	33	30	28	33	30	28	27														
7	41	34	29	25	40	33	29	25	32	28	25	31	28	25	31	27	25	31	27	25	31	27	25	24														
8	38	31	26	23	37	30	26	23	30	26	23	29	25	23	28	25	22	28	25	22	28	25	22	21														
9	36	28	24	21	35	28	24	21	27	23	21	27	23	20	26	23	20	26	23	20	26	23	20	19														
10	34	26	22	19	33	26	22	19	25	21	19	25	21	19	24	21	19	24	21	19	24	21	19	18														

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	11401	11401	11401
5°	11470	11444	11419
10°	11372	11525	11628
15°	11490	11725	11986
20°	11327	11837	12294
25°	11104	12051	12635
30°	10805	12174	12786
35°	10315	11855	12532
40°	9549	11425	11689
45°	8597	9988	10630
50°	7416	8554	8986
55°	6332	6992	7344
60°	4994	5398	5549
65°	4178	3999	4357
70°	3614	2876	3392
75°	2924	2241	2436
80°	2034	1162	1307
85°	289	289	289



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	43.1	4.1	2.4	0°	452	452	452	452	452	
10°-20°	126.7	11.9	7.0	5°	453	452	452	451	451	43
20°-30°	198.5	18.7	11.0	15°	440	441	449	457	459	123
30°-40°	235.6	22.2	13.1	25°	399	416	433	455	454	184
40°-50°	212.3	20.0	11.8	35°	335	355	385	405	407	208
50°-60°	141.8	13.4	7.9	45°	241	263	280	294	298	185
60°-70°	71.5	6.7	4.0	55°	144	152	159	164	167	129
70°-80°	27.3	2.6	1.5	65°	70	67	67	72	73	71
80°-90°	3.5	0.3	0.2	75°	30	26	23	24	25	32
90°-100°	0.0	0.0	0.0	85°	1	2	1	2	1	4
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	
110°-120°	0.0	0.0	0.0							
120°-130°	0.0	0.0	0.0							
130°-140°	0.0	0.0	0.0							
140°-150°	0.0	0.0	0.0							
150°-160°	0.0	0.0	0.0							
160°-170°	0.0	0.0	0.0							
170°-180°	0.0	0.0	0.0							
0°-30°	368.2	34.7	20.5							
0°-40°	603.9	57.0	33.5							
0°-60°	957.9	90.4	53.2							
0°-90°	1060.2	100.0	58.9							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	1060.2	100.0	58.9							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	452	452	452	452	452
5°	453	452	452	451	451
10°	444	448	450	452	454
15°	440	441	449	457	459
20°	422	427	441	455	458
25°	399	416	433	455	454
30°	371	389	418	437	439
35°	335	355	385	405	407
40°	290	313	347	357	355
45°	241	263	280	294	298
50°	189	202	218	225	229
55°	144	152	159	164	167
60°	99	105	107	111	110
65°	70	67	67	72	73
70°	49	44	39	44	46
75°	30	26	23	24	25
80°	14	11	8	9	9
85°	1	2	1	2	1
90°	0	0	0	0	0

(END OF REPORT)