

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: P557845

Luminaire Tested: **FUSL-12-4-LD4-3HI-40-UNV-82-86-EDD**

Issue Date: 7/16/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P557845  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2105-257-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/16/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: FUSL-12-4-LD4-3HI-40-UNV-82-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

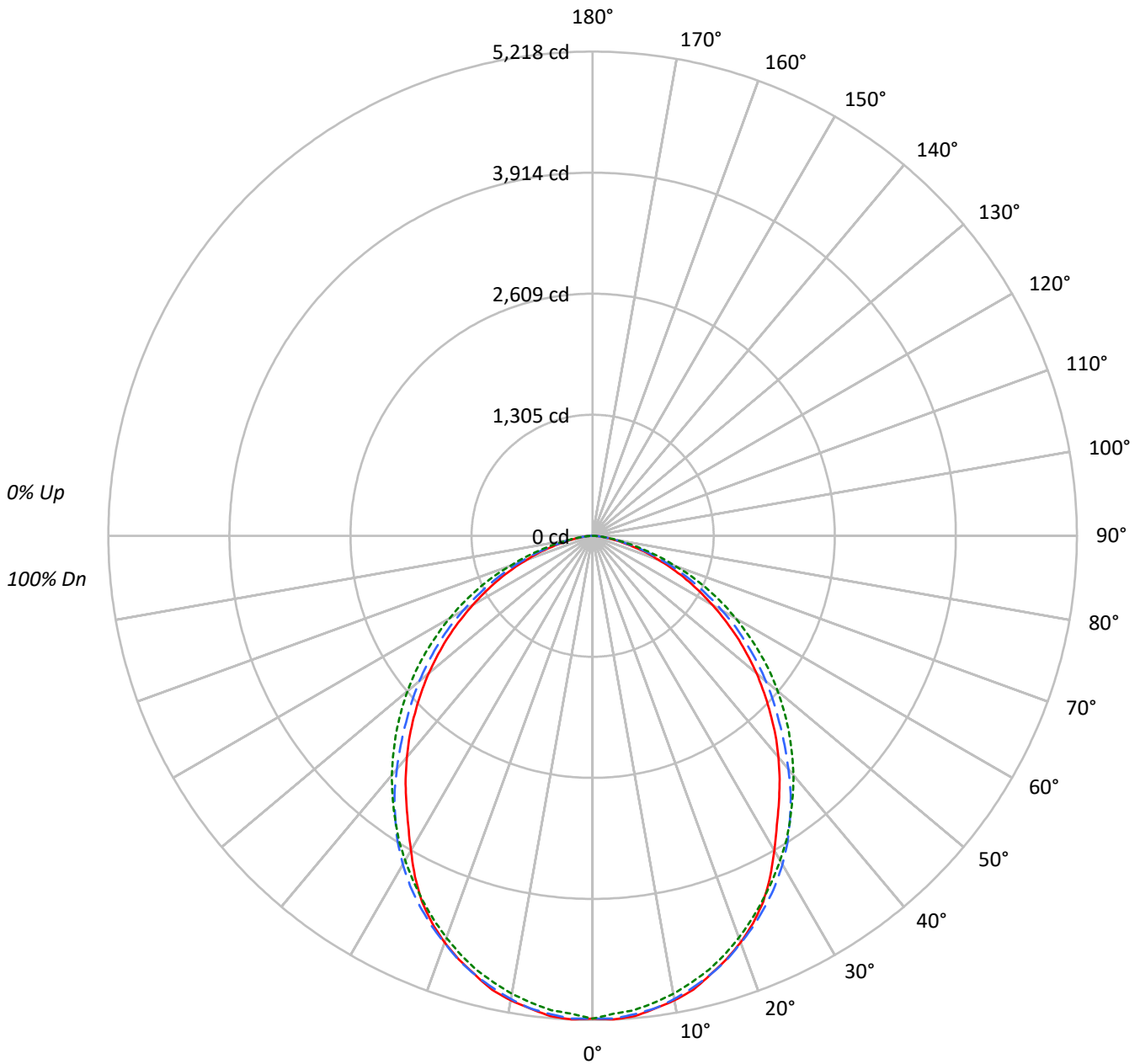
Lumens per Lamp: N/A  
Luminaire Lumens: 12032.0 lumens  
Efficiency: N/A  
Efficacy: 92.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 129.6  
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									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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86																			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73																			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63																			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54																			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47																			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42																			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37																			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34																			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30																			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28																			

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

	0°	45°	90°
0°	14003	14003	14003
5°	14040	13980	13862
10°	13891	13853	13694
15°	13645	13645	13489
20°	13356	13373	13201
25°	12916	13076	12868
30°	12162	12709	12554
35°	11492	12182	12201
40°	10934	11523	11826
45°	10308	10825	11381
50°	9649	10201	10896
55°	8900	9491	10307
60°	8015	8661	9586
65°	7077	7701	8719
70°	5898	6559	7408
75°	4635	5238	5798
80°	3315	3687	4090
85°	2161	2161	2038



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	489.9	4.1
10°-20°	1376.3	11.4
20°-30°	2011.3	16.7
30°-40°	2283.0	19.0
40°-50°	2203.9	18.3
50°-60°	1818.1	15.1
60°-70°	1210.7	10.1
70°-80°	541.8	4.5
80°-90°	96.9	0.8
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
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°	3877.6	32.2
0°-40°	6160.6	51.2
0°-60°	10182.6	84.6
0°-90°	12032.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12032.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5204	5204	5204	5204	5204	
5°	5198	5196	5176	5148	5132	492
15°	4898	4910	4898	4876	4842	1381
25°	4350	4384	4404	4372	4334	1992
35°	3498	3546	3708	3728	3714	2192
45°	2709	2755	2845	2975	2991	2090
55°	1897	1929	2023	2135	2197	1693
65°	1112	1142	1209	1295	1369	1102
75°	446	470	504	528	558	487
85°	70	70	70	66	66	94
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5203.5	5203.5	5203.5	5203.5	5203.5
2.5°	5217.5	5219.5	5207.5	5175.5	5155.6
5°	5197.5	5195.5	5175.5	5147.6	5131.6
7.5°	5139.6	5143.6	5137.6	5097.6	5075.6
10°	5083.6	5085.6	5069.6	5037.6	5011.6
12.5°	5011.6	5009.6	4987.6	4971.6	4929.7
15°	4897.7	4909.7	4897.7	4875.7	4841.7
17.5°	4787.7	4787.7	4795.7	4757.7	4731.8
20°	4663.8	4669.8	4669.8	4639.8	4609.8
22.5°	4519.9	4537.8	4543.8	4511.9	4475.9
25°	4349.9	4383.9	4403.9	4371.9	4333.9
27.5°	4144.0	4196.0	4256.0	4232.0	4190.0
30°	3914.1	3990.1	4090.1	4070.1	4040.1
32.5°	3696.2	3772.2	3910.1	3902.1	3886.2
35°	3498.3	3546.3	3708.2	3728.2	3714.2
37.5°	3310.4	3354.4	3506.3	3552.3	3540.3
40°	3112.5	3160.5	3280.4	3362.4	3366.4
42.5°	2916.6	2962.6	3060.5	3178.5	3178.5
45°	2708.7	2754.7	2844.6	2974.6	2990.6
47.5°	2504.8	2552.8	2640.7	2770.7	2796.7
50°	2304.9	2348.9	2436.8	2562.8	2602.8
52.5°	2097.0	2145.0	2230.9	2346.9	2404.9
55°	1897.1	1929.1	2023.0	2135.0	2197.0
57.5°	1689.2	1719.2	1825.1	1921.1	1985.1
60°	1489.3	1527.3	1609.2	1707.2	1781.2
62.5°	1297.4	1337.4	1407.3	1493.3	1577.3
65°	1111.5	1141.5	1209.4	1295.4	1369.3
67.5°	931.6	957.5	1025.5	1085.5	1163.4
70°	749.6	783.6	833.6	891.6	941.6
72.5°	603.7	617.7	659.7	701.7	753.6
75°	445.8	469.8	503.8	527.7	557.7
77.5°	319.8	333.8	353.8	373.8	401.8
80°	213.9	219.9	237.9	241.9	263.9
82.5°	129.9	133.9	137.9	139.9	147.9
85°	70.0	70.0	70.0	66.0	66.0
87.5°	40.0	40.0	34.0	28.0	20.0
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







— 0°-180°    - - 45°-225°    - - - - 90°-270°







(END OF REPORT)