

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: P557889

Luminaire Tested: **FUSL-12-4-LD4-3HI-50-UNV-81-84-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: P557889  
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-50-UNV-81-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

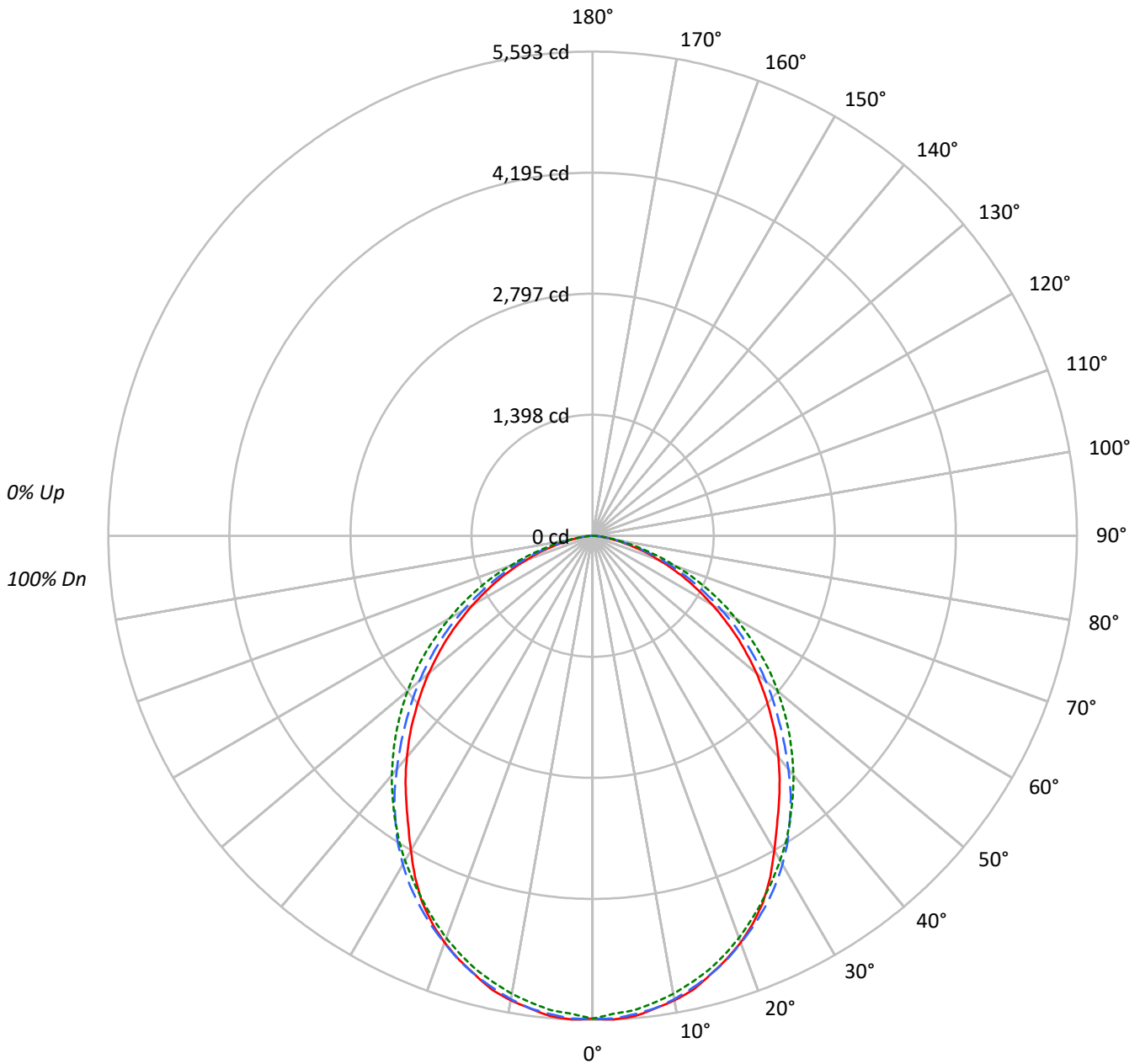
Lumens per Lamp: N/A  
Luminaire Lumens: 12898.0 lumens  
Efficiency: N/A  
Efficacy: 99.5 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	15011	15011	15011
5°	15050	14987	14859
10°	14891	14850	14680
15°	14627	14627	14459
20°	14317	14335	14151
25°	13845	14017	13794
30°	13038	13624	13457
35°	12319	13059	13080
40°	11721	12353	12677
45°	11050	11605	12200
50°	10344	10936	11681
55°	9541	10174	11049
60°	8592	9284	10276
65°	7587	8255	9347
70°	6323	7031	7941
75°	4969	5614	6216
80°	3553	3952	4384
85°	2316	2316	2183



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	525.2	4.1
10°-20°	1475.4	11.4
20°-30°	2156.1	16.7
30°-40°	2447.4	19.0
40°-50°	2362.5	18.3
50°-60°	1948.9	15.1
60°-70°	1297.8	10.1
70°-80°	580.8	4.5
80°-90°	103.9	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°	4156.7	32.2
0°-40°	6604.0	51.2
0°-60°	10915.5	84.6
0°-90°	12898.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12898.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5578	5578	5578	5578	5578	
5°	5572	5570	5548	5518	5501	527
15°	5250	5263	5250	5227	5190	1480
25°	4663	4699	4721	4687	4646	2135
35°	3750	3802	3975	3997	3982	2350
45°	2904	2953	3049	3189	3206	2240
55°	2034	2068	2169	2289	2355	1815
65°	1192	1224	1296	1389	1468	1181
75°	478	504	540	566	598	523
85°	75	75	75	71	71	101
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5578.1	5578.1	5578.1	5578.1	5578.1
2.5°	5593.1	5595.2	5582.3	5548.1	5526.6
5°	5571.6	5569.5	5548.1	5518.0	5500.9
7.5°	5509.5	5513.8	5507.3	5464.5	5440.9
10°	5449.5	5451.6	5434.5	5400.2	5372.3
12.5°	5372.3	5370.2	5346.6	5329.5	5284.5
15°	5250.2	5263.0	5250.2	5226.6	5190.2
17.5°	5132.3	5132.3	5140.9	5100.2	5072.3
20°	4999.5	5005.9	5005.9	4973.7	4941.6
22.5°	4845.2	4864.5	4870.9	4836.6	4798.0
25°	4663.0	4699.4	4720.9	4686.6	4645.9
27.5°	4442.3	4498.0	4562.3	4536.6	4491.6
30°	4195.9	4277.3	4384.4	4363.0	4330.9
32.5°	3962.3	4043.7	4191.6	4183.0	4165.9
35°	3750.1	3801.6	3975.1	3996.6	3981.6
37.5°	3548.7	3595.8	3758.7	3808.0	3795.1
40°	3336.5	3388.0	3516.6	3604.4	3608.7
42.5°	3126.5	3175.8	3280.8	3407.3	3407.3
45°	2903.7	2953.0	3049.4	3188.7	3205.8
47.5°	2685.1	2736.5	2830.8	2970.1	2998.0
50°	2470.8	2517.9	2612.2	2747.2	2790.1
52.5°	2247.9	2299.4	2391.5	2515.8	2577.9
55°	2033.6	2067.9	2168.6	2288.7	2355.1
57.5°	1810.8	1842.9	1956.5	2059.4	2127.9
60°	1596.5	1637.2	1725.1	1830.1	1909.4
62.5°	1390.8	1433.6	1508.6	1600.8	1690.8
65°	1191.5	1223.6	1296.5	1388.6	1467.9
67.5°	998.6	1026.5	1099.3	1163.6	1247.2
70°	803.6	840.0	893.6	955.7	1009.3
72.5°	647.2	662.2	707.2	752.2	807.9
75°	477.9	503.6	540.0	565.7	597.9
77.5°	342.9	357.9	379.3	400.7	430.7
80°	229.3	235.7	255.0	259.3	282.9
82.5°	139.3	143.6	147.9	150.0	158.6
85°	75.0	75.0	75.0	70.7	70.7
87.5°	42.9	42.9	36.4	30.0	21.4
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)