

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: P557765

Luminaire Tested: **FUSL-12-4-LD4-3HI-35-UNV-81-86-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: P557765  
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-35-UNV-81-86-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

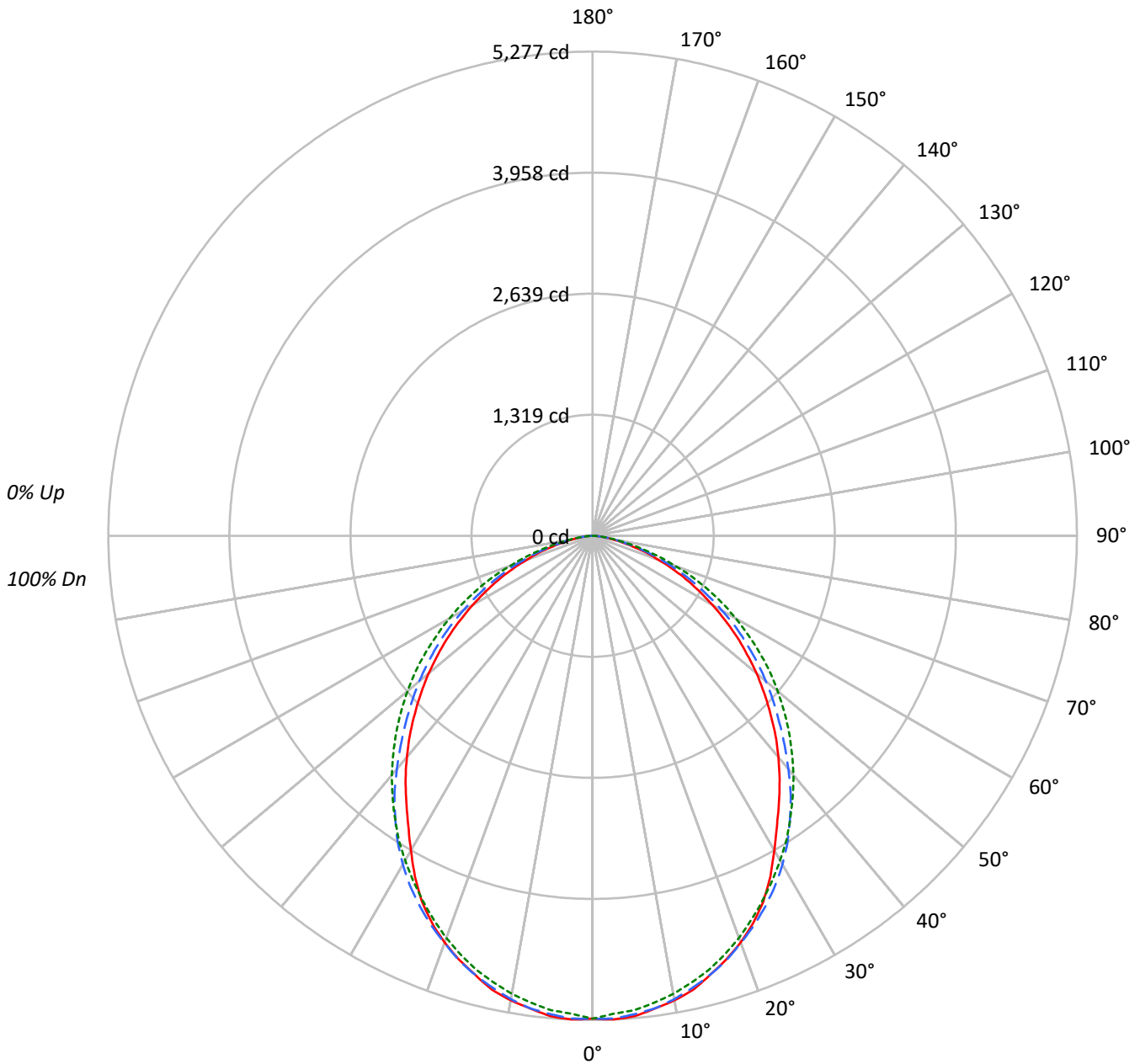
Lumens per Lamp: N/A  
Luminaire Lumens: 12169.0 lumens  
Efficiency: N/A  
Efficacy: 93.9 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

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°	14162	14162	14162
5°	14200	14140	14020
10°	14049	14010	13850
15°	13800	13800	13642
20°	13508	13525	13351
25°	13063	13225	13015
30°	12301	12854	12697
35°	11623	12321	12340
40°	11058	11655	11960
45°	10426	10949	11510
50°	9759	10318	11020
55°	9002	9599	10425
60°	8107	8760	9695
65°	7158	7789	8818
70°	5965	6633	7493
75°	4688	5297	5865
80°	3352	3729	4136
85°	2186	2186	2059



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	495.5	4.1
10°-20°	1392.0	11.4
20°-30°	2034.2	16.7
30°-40°	2309.0	19.0
40°-50°	2229.0	18.3
50°-60°	1838.8	15.1
60°-70°	1224.5	10.1
70°-80°	547.9	4.5
80°-90°	98.0	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°	3921.7	32.2
0°-40°	6230.8	51.2
0°-60°	10298.6	84.6
0°-90°	12169.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12169.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5263	5263	5263	5263	5263	
5°	5257	5255	5234	5206	5190	498
15°	4953	4966	4953	4931	4897	1396
25°	4400	4434	4454	4422	4383	2015
35°	3538	3587	3750	3771	3756	2217
45°	2740	2786	2877	3008	3025	2114
55°	1919	1951	2046	2159	2222	1712
65°	1124	1154	1223	1310	1385	1115
75°	451	475	510	534	564	493
85°	71	71	71	67	67	95
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5262.8	5262.8	5262.8	5262.8	5262.8
2.5°	5276.9	5279.0	5266.8	5234.5	5214.3
5°	5256.7	5254.7	5234.5	5206.2	5190.0
7.5°	5198.1	5202.1	5196.1	5155.6	5133.4
10°	5141.5	5143.5	5127.3	5095.0	5068.7
12.5°	5068.7	5066.7	5044.4	5028.2	4985.8
15°	4953.4	4965.6	4953.4	4931.2	4896.8
17.5°	4842.2	4842.2	4850.3	4811.9	4785.6
20°	4716.9	4723.0	4723.0	4692.6	4662.3
22.5°	4571.3	4589.5	4595.6	4563.2	4526.8
25°	4399.5	4433.8	4454.1	4421.7	4383.3
27.5°	4191.2	4243.8	4304.4	4280.2	4237.7
30°	3958.7	4035.5	4136.6	4116.4	4086.1
32.5°	3738.3	3815.2	3954.7	3946.6	3930.4
35°	3538.2	3586.7	3750.5	3770.7	3756.5
37.5°	3348.1	3392.6	3546.3	3592.8	3580.6
40°	3148.0	3196.5	3317.8	3400.7	3404.7
42.5°	2949.8	2996.3	3095.4	3214.7	3214.7
45°	2739.6	2786.1	2877.0	3008.5	3024.6
47.5°	2533.3	2581.9	2670.8	2802.2	2828.5
50°	2331.1	2375.6	2464.6	2592.0	2632.4
52.5°	2120.9	2169.4	2256.3	2373.6	2432.2
55°	1918.7	1951.0	2046.1	2159.3	2222.0
57.5°	1708.4	1738.8	1845.9	1943.0	2007.7
60°	1506.3	1544.7	1627.6	1726.6	1801.4
62.5°	1312.2	1352.6	1423.4	1510.3	1595.2
65°	1124.1	1154.5	1223.2	1310.1	1384.9
67.5°	942.2	968.4	1037.2	1097.8	1176.7
70°	758.2	792.6	843.1	901.7	952.3
72.5°	610.6	624.7	667.2	709.7	762.2
75°	450.9	475.1	509.5	533.8	564.1
77.5°	323.5	337.6	357.9	378.1	406.4
80°	216.3	222.4	240.6	244.6	266.9
82.5°	131.4	135.5	139.5	141.5	149.6
85°	70.8	70.8	70.8	66.7	66.7
87.5°	40.4	40.4	34.4	28.3	20.2
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)