

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: P558280

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-81-88-EDD-90**

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: P558280  
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-LD4-3STD-35-UNV-81-88-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

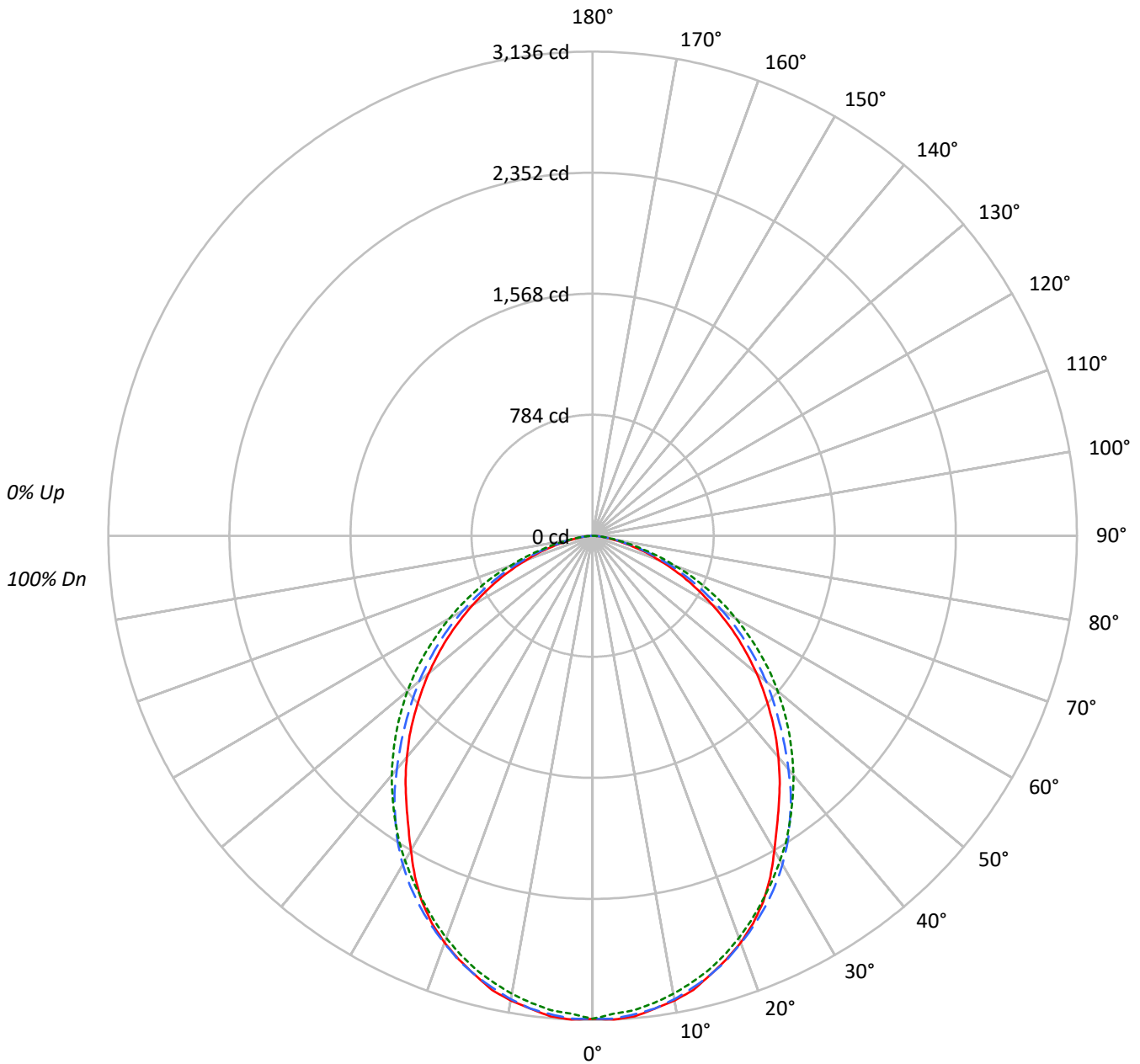
Lumens per Lamp: N/A  
Luminaire Lumens: 7233.0 lumens  
Efficiency: N/A  
Efficacy: 72.4 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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°	8418	8418	8418
5°	8440	8404	8333
10°	8350	8328	8232
15°	8202	8202	8109
20°	8029	8039	7936
25°	7764	7861	7736
30°	7311	7640	7547
35°	6909	7323	7335
40°	6573	6927	7109
45°	6197	6508	6842
50°	5801	6133	6550
55°	5350	5705	6196
60°	4818	5207	5762
65°	4255	4629	5242
70°	3545	3943	4453
75°	2786	3148	3486
80°	1993	2216	2458
85°	1300	1300	1226



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	294.5	4.1
10°-20°	827.4	11.4
20°-30°	1209.1	16.7
30°-40°	1372.4	19.0
40°-50°	1324.9	18.3
50°-60°	1092.9	15.1
60°-70°	727.8	10.1
70°-80°	325.7	4.5
80°-90°	58.3	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°	2331.0	32.2
0°-40°	3703.4	51.2
0°-60°	6121.2	84.6
0°-90°	7233.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7233.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3128	3128	3128	3128	3128	
5°	3124	3123	3111	3094	3085	296
15°	2944	2951	2944	2931	2911	830
25°	2615	2635	2647	2628	2605	1198
35°	2103	2132	2229	2241	2233	1318
45°	1628	1656	1710	1788	1798	1256
55°	1140	1160	1216	1283	1321	1018
65°	668	686	727	779	823	663
75°	268	282	303	317	335	293
85°	42	42	42	40	40	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3128.1	<i>3128.1</i>	3128.1	3128.1	3128.1
2.5°	<i>3136.5</i>	<i>3137.7</i>	<i>3130.5</i>	<i>3111.3</i>	<i>3099.2</i>
5°	3124.5	<i>3123.3</i>	3111.3	3094.4	3084.8
7.5°	3089.6	<i>3092.0</i>	3088.4	3064.4	3051.2
10°	3056.0	<i>3057.2</i>	3047.6	3028.3	3012.7
12.5°	3012.7	<i>3011.5</i>	2998.3	2988.7	2963.4
15°	2944.2	<i>2951.4</i>	2944.2	2931.0	2910.6
17.5°	2878.1	<i>2878.1</i>	2882.9	2860.1	2844.5
20°	2803.6	<i>2807.2</i>	2807.2	2789.2	2771.2
22.5°	2717.1	<i>2727.9</i>	2731.5	2712.3	2690.7
25°	2614.9	<i>2635.4</i>	2647.4	2628.2	2605.3
27.5°	2491.2	<i>2522.4</i>	2558.5	2544.0	2518.8
30°	2353.0	<i>2398.6</i>	2458.7	2446.7	2428.7
32.5°	2222.0	<i>2267.7</i>	2350.6	2345.8	2336.2
35°	2103.0	<i>2131.9</i>	2229.2	2241.2	2232.8
37.5°	1990.1	<i>2016.5</i>	2107.8	2135.5	2128.3
40°	1871.1	<i>1899.9</i>	1972.0	2021.3	2023.7
42.5°	1753.3	<i>1781.0</i>	1839.8	1910.7	1910.7
45°	1628.3	<i>1656.0</i>	1710.1	1788.2	1797.8
47.5°	1505.8	<i>1534.6</i>	1587.5	1665.6	1681.2
50°	1385.6	<i>1412.0</i>	1464.9	1540.6	1564.6
52.5°	1260.6	<i>1289.4</i>	1341.1	1410.8	1445.7
55°	1140.4	<i>1159.7</i>	1216.1	1283.4	1320.7
57.5°	1015.5	<i>1033.5</i>	1097.2	1154.9	1193.3
60°	895.3	<i>918.1</i>	967.4	1026.3	1070.7
62.5°	779.9	<i>804.0</i>	846.0	897.7	948.2
65°	668.2	<i>686.2</i>	727.0	778.7	823.2
67.5°	560.0	<i>575.6</i>	616.5	652.5	699.4
70°	450.6	<i>471.1</i>	501.1	536.0	566.0
72.5°	362.9	<i>371.3</i>	396.6	421.8	453.0
75°	268.0	<i>282.4</i>	302.8	317.3	335.3
77.5°	192.3	<i>200.7</i>	212.7	224.7	241.5
80°	128.6	<i>132.2</i>	143.0	145.4	158.6
82.5°	78.1	<i>80.5</i>	82.9	84.1	88.9
85°	42.1	<i>42.1</i>	42.1	39.7	39.7
87.5°	24.0	<i>24.0</i>	20.4	16.8	12.0
90°	0.0	<i>0.0</i>	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC







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







(END OF REPORT)