

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: P557667

Luminaire Tested: **FUSL-12-4-LD4-2STD-50-UNV-93-85-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: P557667
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-LD4-2STD-50-UNV-93-85-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE
AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

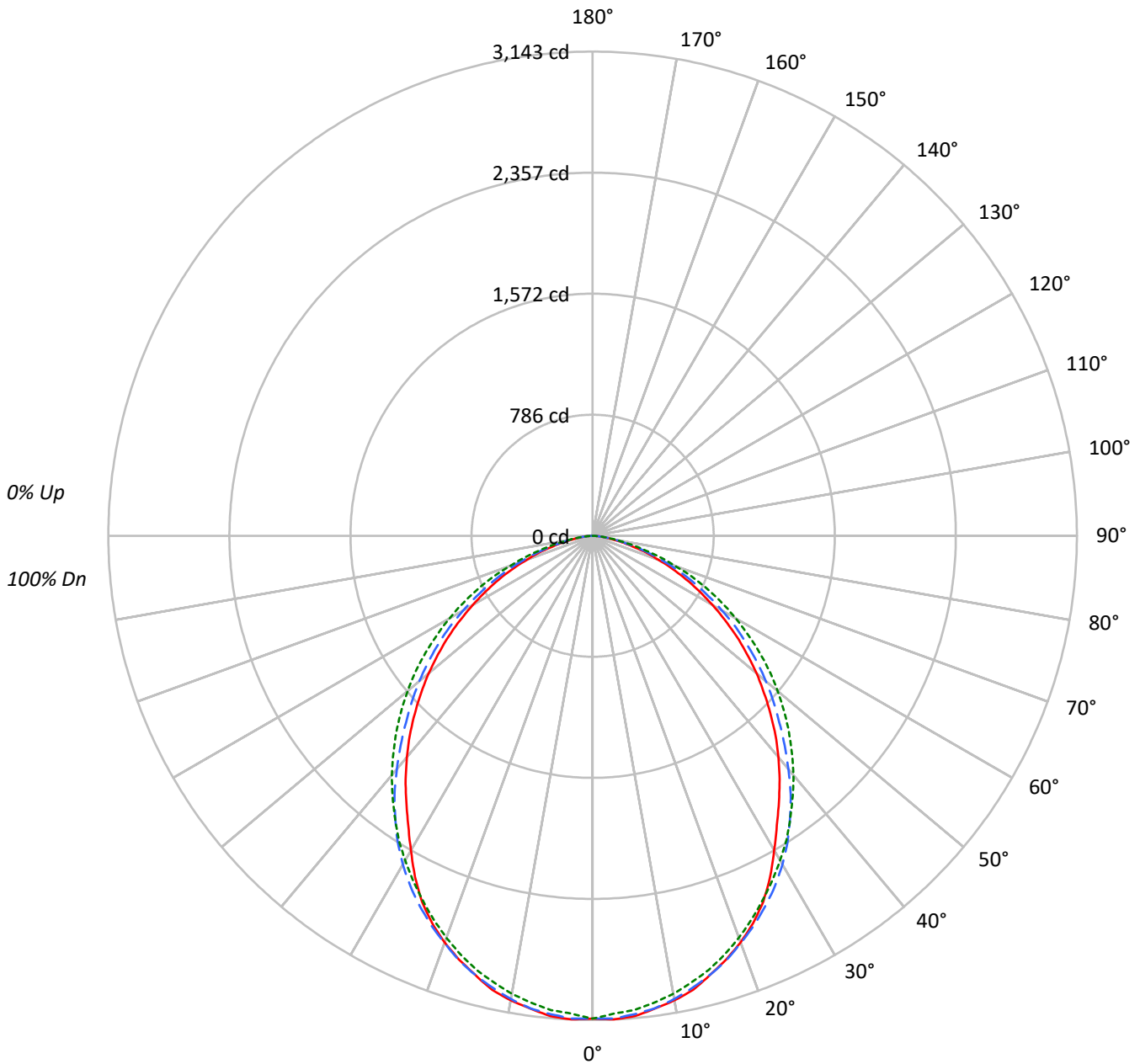
Lumens per Lamp: N/A
Luminaire Lumens: 7247.0 lumens
Efficiency: N/A
Efficacy: 108.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 66.6
Input Voltage (V): NR
Input Current (A_{in}): 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°	8434	8434	8434
5°	8456	8421	8349
10°	8367	8344	8248
15°	8218	8218	8124
20°	8044	8055	7951
25°	7779	7876	7751
30°	7325	7655	7561
35°	6922	7337	7349
40°	6585	6941	7123
45°	6209	6521	6855
50°	5812	6144	6563
55°	5361	5717	6208
60°	4828	5217	5774
65°	4263	4638	5252
70°	3552	3950	4462
75°	2792	3154	3492
80°	1996	2221	2462
85°	1300	1300	1226



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	295.1	4.1
10°-20°	829.0	11.4
20°-30°	1211.4	16.7
30°-40°	1375.1	19.0
40°-50°	1327.4	18.3
50°-60°	1095.1	15.1
60°-70°	729.2	10.1
70°-80°	326.3	4.5
80°-90°	58.4	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°	2335.5	32.2
0°-40°	3710.6	51.2
0°-60°	6133.1	84.6
0°-90°	7247.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7247.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3134	3134	3134	3134	3134	
5°	3130	3129	3117	3100	3091	296
15°	2950	2957	2950	2937	2916	832
25°	2620	2640	2652	2633	2610	1200
35°	2107	2136	2234	2246	2237	1320
45°	1632	1659	1713	1792	1801	1259
55°	1143	1162	1218	1286	1323	1020
65°	670	688	728	780	825	664
75°	268	283	303	318	336	294
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°	3134.1	<i>3134.1</i>	3134.1	3134.1	3134.1
2.5°	<i>3142.6</i>	<i>3143.8</i>	<i>3136.5</i>	<i>3117.3</i>	<i>3105.2</i>
5°	3130.5	<i>3129.3</i>	3117.3	3100.4	3090.8
7.5°	3095.6	<i>3098.0</i>	3094.4	3070.3	3057.1
10°	3061.9	<i>3063.1</i>	3053.5	3034.2	3018.6
12.5°	3018.6	<i>3017.3</i>	3004.1	2994.5	2969.2
15°	2949.9	<i>2957.1</i>	2949.9	2936.7	2916.2
17.5°	2883.7	<i>2883.7</i>	2888.5	2865.6	2850.0
20°	2809.0	<i>2812.7</i>	2812.7	2794.6	2776.5
22.5°	2722.4	<i>2733.2</i>	2736.8	2717.5	2695.9
25°	2620.0	<i>2640.5</i>	2652.5	2633.3	2610.4
27.5°	2496.0	<i>2527.3</i>	2563.4	2549.0	2523.7
30°	2357.5	<i>2403.3</i>	2463.5	2451.4	2433.4
32.5°	2226.3	<i>2272.0</i>	2355.1	2350.3	2340.7
35°	2107.1	<i>2136.0</i>	2233.5	2245.6	2237.1
37.5°	1993.9	<i>2020.4</i>	2111.9	2139.6	2132.4
40°	1874.7	<i>1903.6</i>	1975.8	2025.2	2027.6
42.5°	1756.7	<i>1784.4</i>	1843.4	1914.4	1914.4
45°	1631.5	<i>1659.2</i>	1713.4	1791.6	1801.3
47.5°	1508.7	<i>1537.6</i>	1590.5	1668.8	1684.5
50°	1388.3	<i>1414.8</i>	1467.7	1543.6	1567.7
52.5°	1263.0	<i>1291.9</i>	1343.7	1413.6	1448.5
55°	1142.6	<i>1161.9</i>	1218.5	1285.9	1323.3
57.5°	1017.4	<i>1035.5</i>	1099.3	1157.1	1195.6
60°	897.0	<i>919.9</i>	969.3	1028.3	1072.8
62.5°	781.4	<i>805.5</i>	847.7	899.4	950.0
65°	669.5	<i>687.5</i>	728.4	780.2	824.8
67.5°	561.1	<i>576.7</i>	617.7	653.8	700.8
70°	451.5	<i>472.0</i>	502.1	537.0	567.1
72.5°	363.6	<i>372.1</i>	397.3	422.6	453.9
75°	268.5	<i>283.0</i>	303.4	317.9	335.9
77.5°	192.6	<i>201.1</i>	213.1	225.2	242.0
80°	128.8	<i>132.4</i>	143.3	145.7	158.9
82.5°	78.3	<i>80.7</i>	83.1	84.3	89.1
85°	42.1	<i>42.1</i>	42.1	39.7	39.7
87.5°	24.1	<i>24.1</i>	20.5	16.9	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)