

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: P557164

Luminaire Tested: **FUSL-12-4-LD4-2HI-50-UNV-93-96-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: P557164
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-LD4-2HI-50-UNV-93-96-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

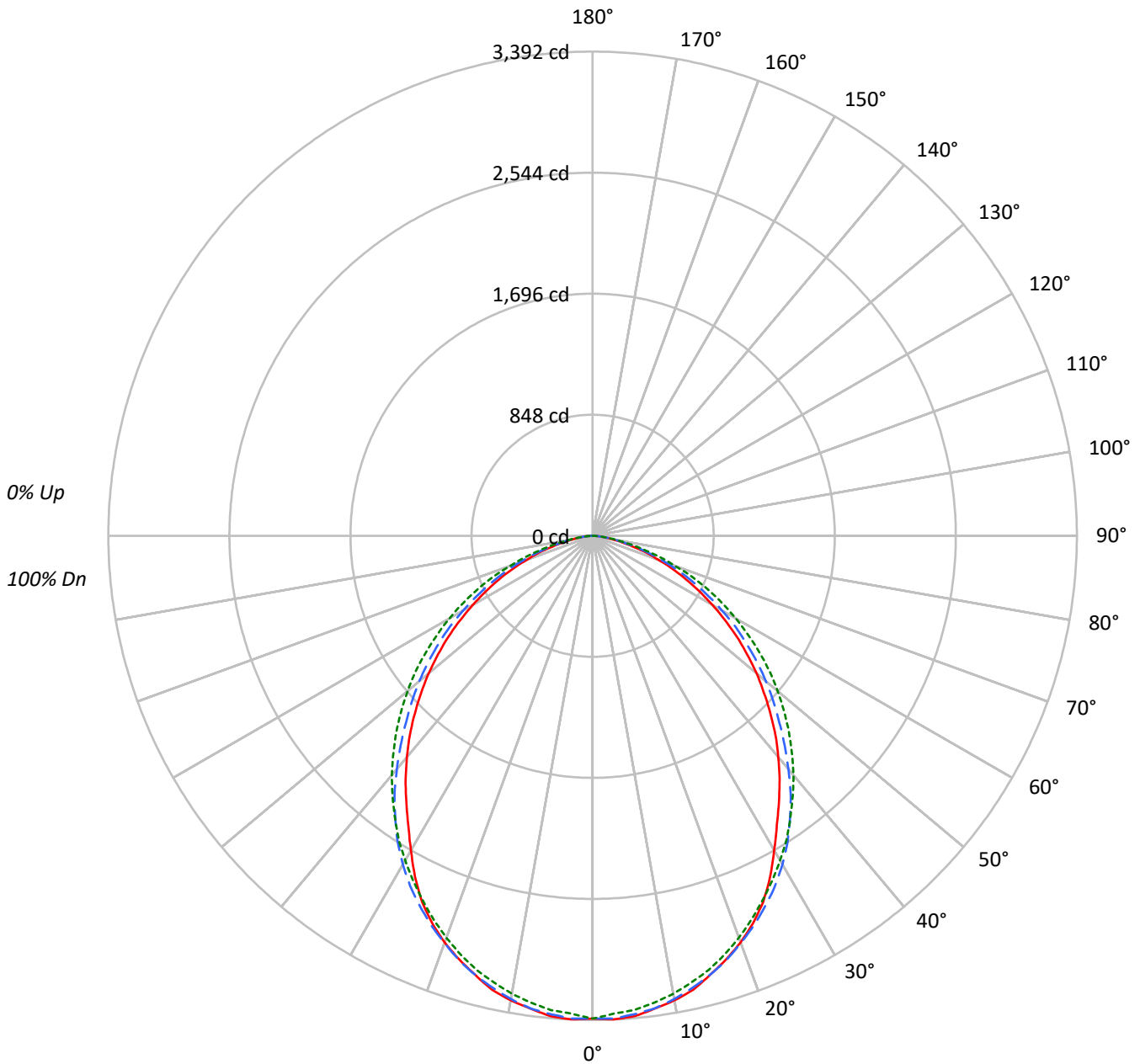
Lumens per Lamp: N/A
Luminaire Lumens: 7821.0 lumens
Efficiency: N/A
Efficacy: 90.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	9102	9102	9102
5°	9126	9088	9010
10°	9029	9004	8901
15°	8869	8869	8768
20°	8681	8692	8581
25°	8395	8500	8364
30°	7906	8261	8160
35°	7470	7918	7931
40°	7107	7490	7687
45°	6701	7037	7398
50°	6272	6631	7083
55°	5785	6169	6700
60°	5210	5630	6231
65°	4600	5005	5668
70°	3834	4264	4815
75°	3013	3405	3769
80°	2154	2396	2658
85°	1405	1405	1325



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	318.5	4.1
10°-20°	894.6	11.4
20°-30°	1307.4	16.7
30°-40°	1484.0	19.0
40°-50°	1432.6	18.3
50°-60°	1181.8	15.1
60°-70°	787.0	10.1
70°-80°	352.2	4.5
80°-90°	63.0	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°	2520.5	32.2
0°-40°	4004.5	51.2
0°-60°	6618.9	84.6
0°-90°	7821.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7821.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3382	3382	3382	3382	3382	
5°	3378	3377	3364	3346	3336	320
15°	3184	3191	3184	3169	3147	897
25°	2828	2850	2863	2842	2817	1295
35°	2274	2305	2410	2423	2414	1425
45°	1761	1791	1849	1934	1944	1358
55°	1233	1254	1315	1388	1428	1101
65°	722	742	786	842	890	716
75°	290	305	328	343	362	317
85°	46	46	46	43	43	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3382.4	<i>3382.4</i>	3382.4	3382.4	3382.4
2.5°	<i>3391.5</i>	<i>3392.8</i>	<i>3385.0</i>	<i>3364.2</i>	<i>3351.2</i>
5°	3378.5	<i>3377.2</i>	3364.2	3346.0	3335.6
7.5°	3340.8	<i>3343.4</i>	3339.5	3313.5	3299.2
10°	3304.4	<i>3305.7</i>	3295.3	3274.5	3257.6
12.5°	3257.6	<i>3256.3</i>	3242.0	3231.6	3204.4
15°	3183.6	<i>3191.4</i>	3183.6	3169.3	3147.2
17.5°	3112.1	<i>3112.1</i>	3117.3	3092.6	3075.7
20°	3031.5	<i>3035.4</i>	3035.4	3015.9	2996.5
22.5°	2938.0	<i>2949.7</i>	2953.6	2932.8	2909.4
25°	2827.5	<i>2849.6</i>	2862.6	2841.8	2817.1
27.5°	2693.7	<i>2727.5</i>	2766.5	2750.9	2723.6
30°	2544.3	<i>2593.6</i>	2658.6	2645.6	2626.1
32.5°	2402.6	<i>2452.0</i>	2541.7	2536.5	2526.1
35°	2274.0	<i>2305.2</i>	2410.4	2423.4	2414.3
37.5°	2151.8	<i>2180.4</i>	2279.2	2309.1	2301.3
40°	2023.2	<i>2054.4</i>	2132.3	2185.6	2188.2
42.5°	1895.8	<i>1925.7</i>	1989.4	2066.1	2066.1
45°	1760.7	<i>1790.6</i>	1849.1	1933.5	1943.9
47.5°	1628.2	<i>1659.4</i>	1716.5	1801.0	1817.9
50°	1498.2	<i>1526.8</i>	1584.0	1665.9	1691.8
52.5°	1363.1	<i>1394.3</i>	1450.1	1525.5	1563.2
55°	1233.1	<i>1253.9</i>	1315.0	1387.8	1428.1
57.5°	1098.0	<i>1117.5</i>	1186.4	1248.7	1290.3
60°	968.1	<i>992.8</i>	1046.0	1109.7	1157.8
62.5°	843.3	<i>869.3</i>	914.8	970.7	1025.2
65°	722.5	<i>742.0</i>	786.1	842.0	890.1
67.5°	605.5	<i>622.4</i>	666.6	705.6	756.3
70°	487.3	<i>509.4</i>	541.9	579.5	612.0
72.5°	392.4	<i>401.5</i>	428.8	456.1	489.9
75°	289.8	<i>305.4</i>	327.5	343.0	362.5
77.5°	207.9	<i>217.0</i>	230.0	243.0	261.2
80°	139.0	<i>142.9</i>	154.6	157.2	171.5
82.5°	84.5	<i>87.1</i>	89.7	91.0	96.2
85°	45.5	<i>45.5</i>	45.5	42.9	42.9
87.5°	26.0	<i>26.0</i>	22.1	18.2	13.0
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)