

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: P556931

Luminaire Tested: **FUSL-12-4-LD4-2HI-30-UNV-81-85-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: P556931
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-30-UNV-81-85-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .187
CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

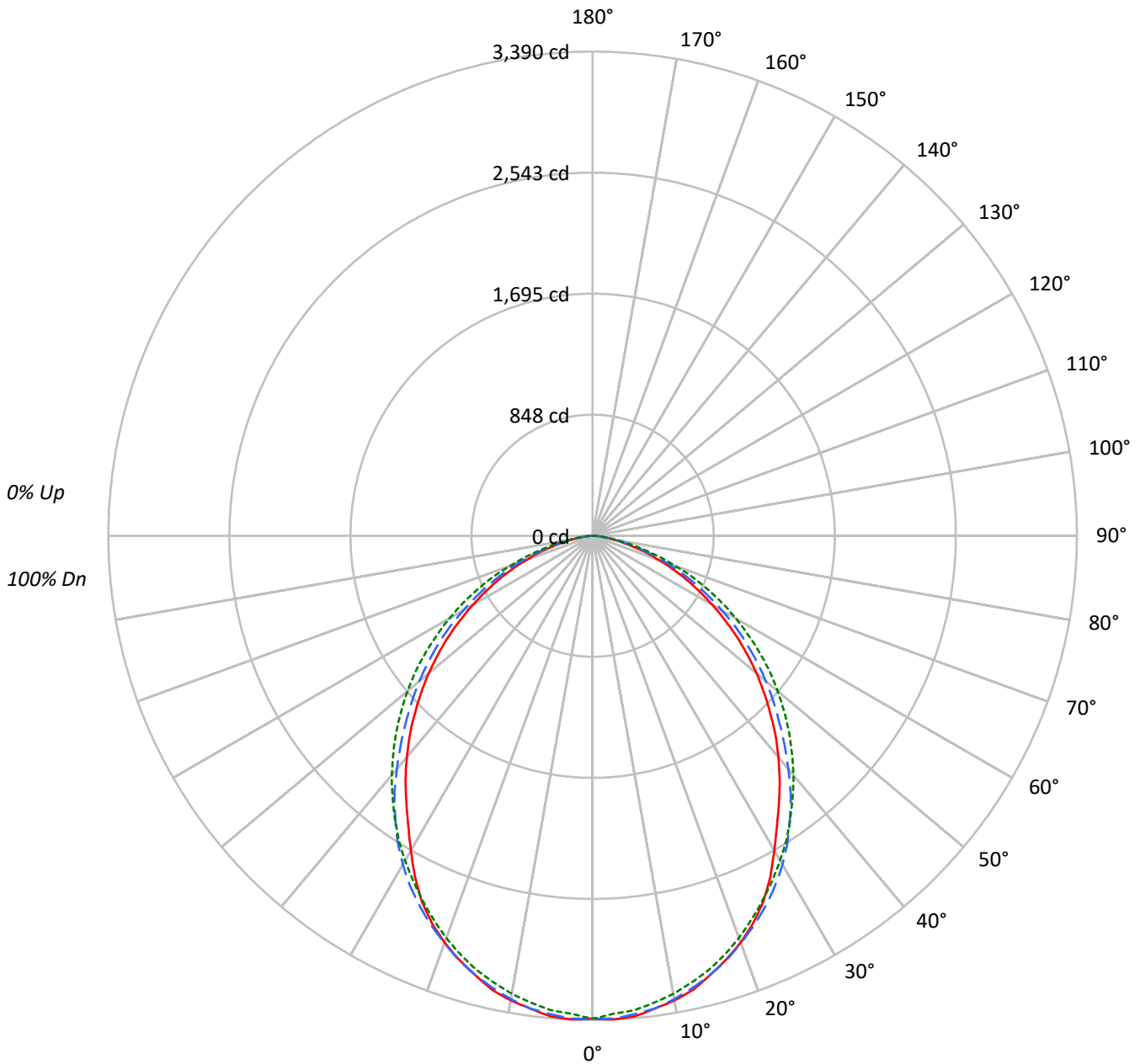
Lumens per Lamp: N/A
Luminaire Lumens: 7818.0 lumens
Efficiency: N/A
Efficacy: 90.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
Input Voltage (V): NR
Input Current (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				20				20	
RC	80				70				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				100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86				86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73				73
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63				63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54				54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47				47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42				42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37				37
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34				34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30				30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28				28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9098	9098	9098
5°	9123	9084	9007
10°	9026	9001	8898
15°	8866	8866	8764
20°	8678	8689	8578
25°	8392	8496	8361
30°	7903	8258	8157
35°	7467	7915	7928
40°	7104	7488	7684
45°	6698	7034	7395
50°	6270	6629	7080
55°	5783	6167	6697
60°	5208	5627	6229
65°	4599	5004	5666
70°	3832	4261	4814
75°	3012	3403	3768
80°	2154	2396	2658
85°	1405	1405	1325



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	318.3	4.1
10°-20°	894.3	11.4
20°-30°	1306.9	16.7
30°-40°	1483.5	19.0
40°-50°	1432.0	18.3
50°-60°	1181.3	15.1
60°-70°	786.7	10.1
70°-80°	352.0	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°	2519.5	32.2
0°-40°	4003.0	51.2
0°-60°	6616.3	84.6
0°-90°	7818.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7818.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3381	3381	3381	3381	3381	
5°	3377	3376	3363	3345	3334	320
15°	3182	3190	3182	3168	3146	897
25°	2826	2848	2862	2841	2816	1294
35°	2273	2304	2410	2422	2413	1424
45°	1760	1790	1848	1933	1943	1358
55°	1233	1254	1314	1387	1428	1100
65°	722	742	786	842	890	716
75°	290	305	327	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°	3381.1	<i>3381.1</i>	3381.1	3381.1	3381.1
2.5°	<i>3390.2</i>	<i>3391.5</i>	<i>3383.7</i>	<i>3362.9</i>	<i>3349.9</i>
5°	3377.2	<i>3375.9</i>	3362.9	3344.7	3334.3
7.5°	3339.5	<i>3342.1</i>	3338.2	3312.2	3298.0
10°	3303.1	<i>3304.4</i>	3294.1	3273.3	3256.4
12.5°	3256.4	<i>3255.1</i>	3240.8	3230.4	3203.1
15°	3182.3	<i>3190.1</i>	3182.3	3168.1	3146.0
17.5°	3110.9	<i>3110.9</i>	3116.1	3091.4	3074.5
20°	3030.4	<i>3034.3</i>	3034.3	3014.8	2995.3
22.5°	2936.9	<i>2948.5</i>	2952.4	2931.7	2908.3
25°	2826.4	<i>2848.5</i>	2861.5	2840.7	2816.1
27.5°	2692.7	<i>2726.4</i>	2765.4	2749.8	2722.5
30°	2543.3	<i>2592.6</i>	2657.6	2644.6	2625.1
32.5°	2401.7	<i>2451.1</i>	2540.7	2535.5	2525.1
35°	2273.1	<i>2304.3</i>	2409.5	2422.5	2413.4
37.5°	2151.0	<i>2179.6</i>	2278.3	2308.2	2300.4
40°	2022.4	<i>2053.6</i>	2131.5	2184.8	2187.4
42.5°	1895.1	<i>1925.0</i>	1988.6	2065.3	2065.3
45°	1760.0	<i>1789.9</i>	1848.4	1932.8	1943.2
47.5°	1627.5	<i>1658.7</i>	1715.9	1800.3	1817.2
50°	1497.7	<i>1526.2</i>	1583.4	1665.2	1691.2
52.5°	1362.6	<i>1393.7</i>	1449.6	1524.9	1562.6
55°	1232.7	<i>1253.5</i>	1314.5	1387.2	1427.5
57.5°	1097.6	<i>1117.1</i>	1185.9	1248.3	1289.8
60°	967.7	<i>992.4</i>	1045.6	1109.3	1157.3
62.5°	843.0	<i>869.0</i>	914.4	970.3	1024.8
65°	722.2	<i>741.7</i>	785.8	841.7	889.8
67.5°	605.3	<i>622.2</i>	666.3	705.3	756.0
70°	487.1	<i>509.2</i>	541.6	579.3	611.8
72.5°	392.3	<i>401.4</i>	428.6	455.9	489.7
75°	289.7	<i>305.2</i>	327.3	342.9	362.4
77.5°	207.8	<i>216.9</i>	229.9	242.9	261.1
80°	139.0	<i>142.9</i>	154.6	157.2	171.5
82.5°	84.4	<i>87.0</i>	89.6	90.9	96.1
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)