

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: P557991

Luminaire Tested: **FUSL-12-4-LD4-3LO-30-UNV-93-87-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: P557991
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-LD4-3LO-30-UNV-93-87-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

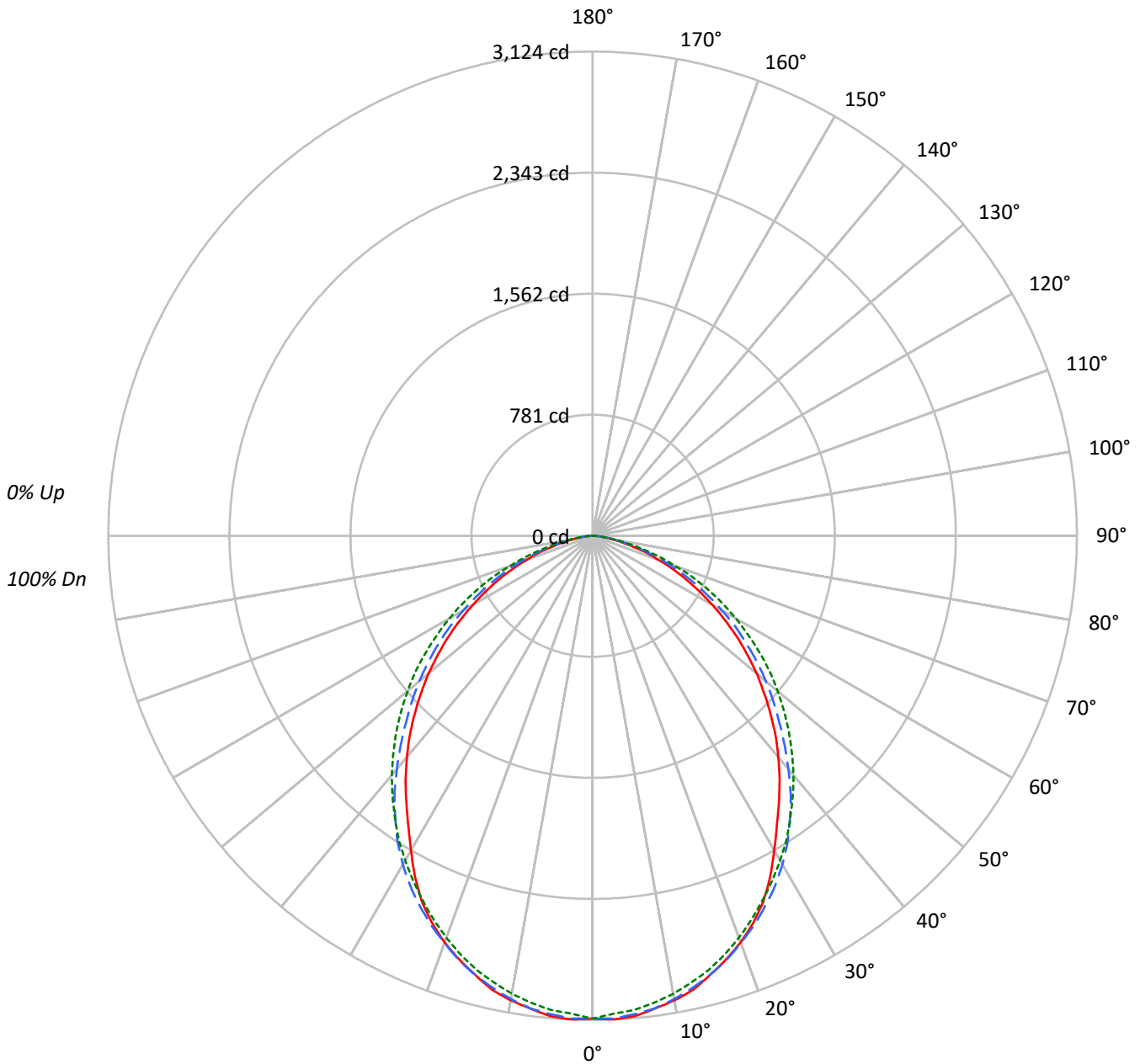
Lumens per Lamp: N/A
Luminaire Lumens: 7203.0 lumens
Efficiency: N/A
Efficacy: 102.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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°	8383	8383	8383
5°	8405	8370	8298
10°	8316	8293	8198
15°	8168	8168	8075
20°	7995	8006	7903
25°	7732	7828	7704
30°	7281	7608	7515
35°	6880	7293	7304
40°	6545	6898	7079
45°	6171	6481	6813
50°	5776	6107	6523
55°	5328	5682	6170
60°	4799	5185	5739
65°	4237	4610	5220
70°	3531	3926	4435
75°	2775	3136	3472
80°	1985	2207	2448
85°	1294	1294	1220



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.3	4.1
10°-20°	824.0	11.4
20°-30°	1204.1	16.7
30°-40°	1366.7	19.0
40°-50°	1319.4	18.3
50°-60°	1088.4	15.1
60°-70°	724.8	10.1
70°-80°	324.3	4.5
80°-90°	58.0	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°	2321.3	32.2
0°-40°	3688.1	51.2
0°-60°	6095.9	84.6
0°-90°	7203.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7203.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3115	3115	3115	3115	3115	
5°	3112	3110	3098	3082	3072	295
15°	2932	2939	2932	2919	2898	827
25°	2604	2624	2636	2617	2594	1193
35°	2094	2123	2220	2232	2224	1312
45°	1622	1649	1703	1781	1790	1251
55°	1136	1155	1211	1278	1315	1014
65°	665	683	724	776	820	660
75°	267	281	302	316	334	292
85°	42	42	42	40	40	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3115.1	<i>3115.1</i>	3115.1	3115.1	3115.1
2.5°	<i>3123.5</i>	<i>3124.7</i>	<i>3117.5</i>	<i>3098.4</i>	<i>3086.4</i>
5°	3111.5	<i>3110.3</i>	3098.4	3081.6	3072.0
7.5°	3076.8	<i>3079.2</i>	3075.6	3051.7	3038.5
10°	3043.3	<i>3044.5</i>	3034.9	3015.8	3000.2
12.5°	3000.2	<i>2999.0</i>	2985.9	2976.3	2951.2
15°	2932.0	<i>2939.2</i>	2932.0	2918.8	2898.5
17.5°	2866.2	<i>2866.2</i>	2871.0	2848.2	2832.7
20°	2792.0	<i>2795.6</i>	2795.6	2777.6	2759.7
22.5°	2705.8	<i>2716.6</i>	2720.2	2701.0	2679.5
25°	2604.1	<i>2624.4</i>	2636.4	2617.3	2594.5
27.5°	2480.8	<i>2512.0</i>	2547.9	2533.5	2508.4
30°	2343.2	<i>2388.7</i>	2448.5	2436.6	2418.6
32.5°	2212.8	<i>2258.2</i>	2340.8	2336.0	2326.5
35°	2094.3	<i>2123.0</i>	2220.0	2231.9	2223.5
37.5°	1981.8	<i>2008.1</i>	2099.1	2126.6	2119.4
40°	1863.3	<i>1892.0</i>	1963.8	2012.9	2015.3
42.5°	1746.0	<i>1773.6</i>	1832.2	1902.8	1902.8
45°	1621.6	<i>1649.1</i>	1703.0	1780.7	1790.3
47.5°	1499.5	<i>1528.2</i>	1580.9	1658.7	1674.2
50°	1379.8	<i>1406.2</i>	1458.8	1534.2	1558.2
52.5°	1255.4	<i>1284.1</i>	1335.6	1405.0	1439.7
55°	1135.7	<i>1154.9</i>	1211.1	1278.1	1315.2
57.5°	1011.2	<i>1029.2</i>	1092.6	1150.1	1188.4
60°	891.6	<i>914.3</i>	963.4	1022.0	1066.3
62.5°	776.7	<i>800.6</i>	842.5	894.0	944.2
65°	665.4	<i>683.3</i>	724.0	775.5	819.8
67.5°	557.7	<i>573.2</i>	613.9	649.8	696.5
70°	448.8	<i>469.1</i>	499.0	533.7	563.7
72.5°	361.4	<i>369.8</i>	394.9	420.1	451.2
75°	266.9	<i>281.2</i>	301.6	315.9	333.9
77.5°	191.5	<i>199.9</i>	211.8	223.8	240.5
80°	128.1	<i>131.6</i>	142.4	144.8	158.0
82.5°	77.8	<i>80.2</i>	82.6	83.8	88.6
85°	41.9	<i>41.9</i>	41.9	39.5	39.5
87.5°	23.9	<i>23.9</i>	20.3	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)