

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: P558349

Luminaire Tested: **FUSL-12-4-LD4-3STD-40-UNV-81-96-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: P558349
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-40-UNV-81-96-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

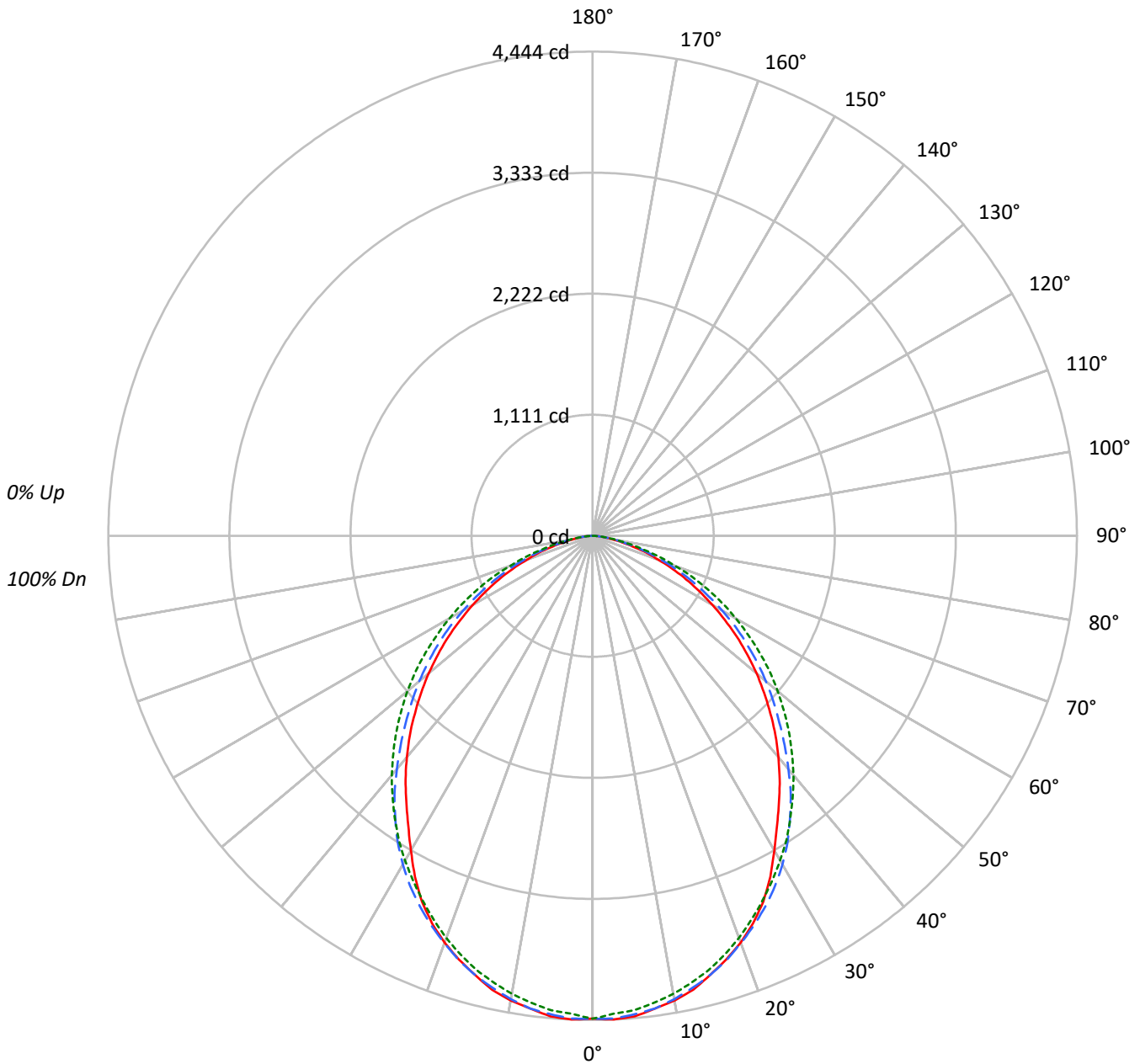
Lumens per Lamp: N/A
Luminaire Lumens: 10249.0 lumens
Efficiency: N/A
Efficacy: 102.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 99.9
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°	11927	11927	11927
5°	11959	11909	11807
10°	11833	11800	11665
15°	11623	11623	11490
20°	11377	11391	11245
25°	11002	11138	10961
30°	10360	10826	10693
35°	9789	10377	10393
40°	9314	9816	10073
45°	8781	9221	9694
50°	8219	8690	9282
55°	7582	8085	8780
60°	6828	7378	8166
65°	6029	6560	7427
70°	5024	5587	6310
75°	3948	4461	4940
80°	2824	3140	3484
85°	1840	1840	1735



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	417.3	4.1
10°-20°	1172.4	11.4
20°-30°	1713.2	16.7
30°-40°	1944.7	19.0
40°-50°	1877.3	18.3
50°-60°	1548.7	15.1
60°-70°	1031.3	10.1
70°-80°	461.5	4.5
80°-90°	82.6	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°	3303.0	32.2
0°-40°	5247.7	51.2
0°-60°	8673.7	84.6
0°-90°	10249.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10249.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4432	4432	4432	4432	4432	
5°	4427	4426	4409	4385	4371	419
15°	4172	4182	4172	4153	4124	1176
25°	3705	3734	3751	3724	3692	1697
35°	2980	3021	3159	3176	3164	1867
45°	2307	2346	2423	2534	2547	1780
55°	1616	1643	1723	1819	1871	1442
65°	947	972	1030	1103	1166	939
75°	380	400	429	450	475	415
85°	60	60	60	56	56	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4432.4	4432.4	4432.4	4432.4	4432.4
2.5°	4444.3	4446.1	4435.8	4408.6	4391.6
5°	4427.3	4425.6	4408.6	4384.7	4371.1
7.5°	4377.9	4381.3	4376.2	4342.2	4323.4
10°	4330.3	4332.0	4318.3	4291.1	4269.0
12.5°	4269.0	4267.3	4248.5	4234.9	4199.1
15°	4171.9	4182.1	4171.9	4153.2	4124.2
17.5°	4078.2	4078.2	4085.1	4052.7	4030.6
20°	3972.7	3977.8	3977.8	3952.2	3926.7
22.5°	3850.1	3865.4	3870.5	3843.3	3812.6
25°	3705.3	3734.3	3751.3	3724.1	3691.7
27.5°	3529.9	3574.2	3625.3	3604.9	3569.1
30°	3334.1	3398.8	3484.0	3466.9	3441.4
32.5°	3148.5	3213.2	3330.7	3323.9	3310.3
35°	2979.9	3020.8	3158.7	3175.8	3163.8
37.5°	2819.9	2857.3	2986.7	3025.9	3015.7
40°	2651.3	2692.2	2794.3	2864.1	2867.5
42.5°	2484.4	2523.6	2607.0	2707.5	2707.5
45°	2307.3	2346.5	2423.1	2533.8	2547.4
47.5°	2133.6	2174.5	2249.4	2360.1	2382.2
50°	1963.3	2000.8	2075.7	2183.0	2217.1
52.5°	1786.3	1827.1	1900.3	1999.1	2048.5
55°	1616.0	1643.2	1723.2	1818.6	1871.4
57.5°	1438.9	1464.4	1554.7	1636.4	1690.9
60°	1268.6	1301.0	1370.8	1454.2	1517.2
62.5°	1105.1	1139.2	1198.8	1272.0	1343.5
65°	946.8	972.3	1030.2	1103.4	1166.4
67.5°	793.5	815.6	873.5	924.6	991.0
70°	638.6	667.5	710.1	759.5	802.0
72.5°	514.3	526.2	561.9	597.7	642.0
75°	379.7	400.2	429.1	449.5	475.1
77.5°	272.5	284.4	301.4	318.4	342.3
80°	182.2	187.3	202.6	206.0	224.8
82.5°	110.7	114.1	117.5	119.2	126.0
85°	59.6	59.6	59.6	56.2	56.2
87.5°	34.1	34.1	28.9	23.8	17.0
90°	0.0	0.0	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





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







(END OF REPORT)