

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: P558286

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-81-97-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: P558286
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-35-UNV-81-97-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

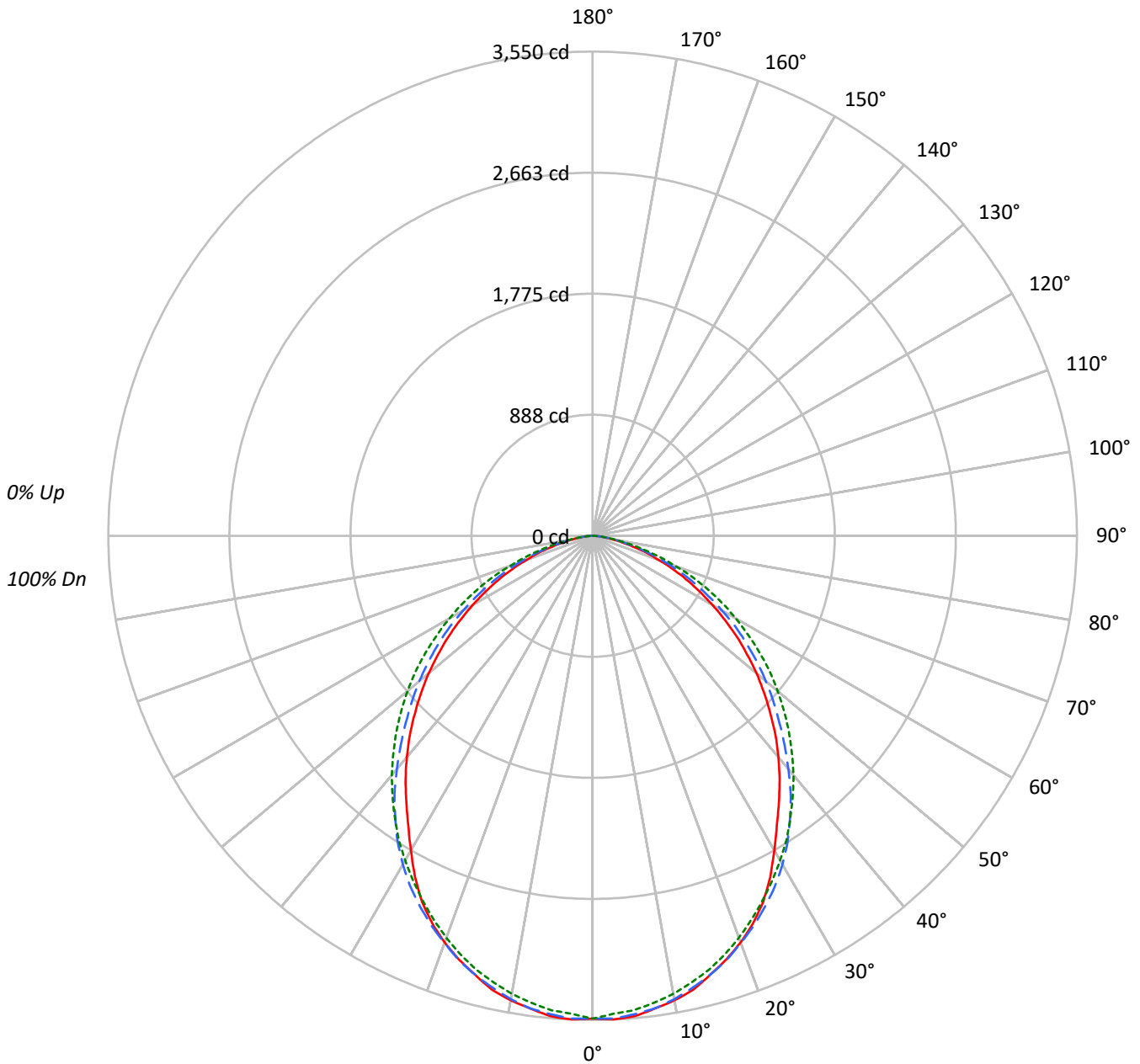
Lumens per Lamp: N/A
Luminaire Lumens: 8186.0 lumens
Efficiency: N/A
Efficacy: 81.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	9527	9527	9527
5°	9552	9512	9431
10°	9451	9425	9317
15°	9283	9283	9177
20°	9086	9098	8981
25°	8787	8896	8755
30°	8275	8647	8541
35°	7819	8288	8301
40°	7439	7840	8045
45°	7013	7365	7743
50°	6565	6941	7413
55°	6055	6457	7013
60°	5453	5892	6522
65°	4815	5239	5932
70°	4013	4462	5040
75°	3153	3563	3946
80°	2255	2507	2782
85°	1470	1470	1386



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	333.3	4.1
10°-20°	936.4	11.4
20°-30°	1368.4	16.7
30°-40°	1553.3	19.0
40°-50°	1499.4	18.3
50°-60°	1236.9	15.1
60°-70°	823.7	10.1
70°-80°	368.6	4.5
80°-90°	65.9	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°	2638.1	32.2
0°-40°	4191.4	51.2
0°-60°	6927.8	84.6
0°-90°	8186.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8186.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3540	3540	3540	3540	3540	
5°	3536	3535	3521	3502	3491	335
15°	3332	3340	3332	3317	3294	939
25°	2960	2983	2996	2974	2949	1355
35°	2380	2413	2523	2536	2527	1491
45°	1843	1874	1935	2024	2035	1422
55°	1291	1312	1376	1452	1495	1152
65°	756	777	823	881	932	750
75°	303	320	343	359	380	332
85°	48	48	48	45	45	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3540.2	3540.2	3540.2	3540.2	3540.2
2.5°	3549.8	3551.1	3543.0	3521.2	3507.6
5°	3536.2	3534.8	3521.2	3502.2	3491.3
7.5°	3496.7	3499.4	3495.4	3468.2	3453.2
10°	3458.6	3460.0	3449.1	3427.3	3409.7
12.5°	3409.7	3408.3	3393.3	3382.5	3353.9
15°	3332.1	3340.3	3332.1	3317.2	3294.1
17.5°	3257.3	3257.3	3262.8	3236.9	3219.3
20°	3173.0	3177.1	3177.1	3156.7	3136.3
22.5°	3075.1	3087.3	3091.4	3069.7	3045.2
25°	2959.5	2982.6	2996.2	2974.4	2948.6
27.5°	2819.4	2854.8	2895.6	2879.2	2850.7
30°	2663.0	2714.7	2782.7	2769.1	2748.7
32.5°	2514.7	2566.4	2660.3	2654.8	2644.0
35°	2380.1	2412.7	2522.9	2536.5	2527.0
37.5°	2252.3	2282.2	2385.5	2416.8	2408.7
40°	2117.6	2150.3	2231.9	2287.6	2290.3
42.5°	1984.3	2015.6	2082.3	2162.5	2162.5
45°	1842.9	1874.2	1935.4	2023.8	2034.6
47.5°	1704.2	1736.8	1796.6	1885.0	1902.7
50°	1568.1	1598.1	1657.9	1743.6	1770.8
52.5°	1426.7	1459.3	1517.8	1596.7	1636.2
55°	1290.7	1312.5	1376.4	1452.5	1494.7
57.5°	1149.2	1169.7	1241.7	1307.0	1350.5
60°	1013.2	1039.1	1094.8	1161.5	1211.8
62.5°	882.7	909.9	957.5	1016.0	1073.1
65°	756.2	776.6	822.8	881.3	931.6
67.5°	633.8	651.5	697.7	738.5	791.6
70°	510.0	533.1	567.1	606.6	640.6
72.5°	410.7	420.3	448.8	477.4	512.7
75°	303.3	319.6	342.7	359.1	379.5
77.5°	217.6	227.1	240.7	254.3	273.4
80°	145.5	149.6	161.8	164.6	179.5
82.5°	88.4	91.1	93.8	95.2	100.6
85°	47.6	47.6	47.6	44.9	44.9
87.5°	27.2	27.2	23.1	19.0	13.6
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)