

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: P558111

Luminaire Tested: **FUSL-12-4-LD4-3LO-40-UNV-82-97-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: P558111
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-40-UNV-82-97-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375
CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

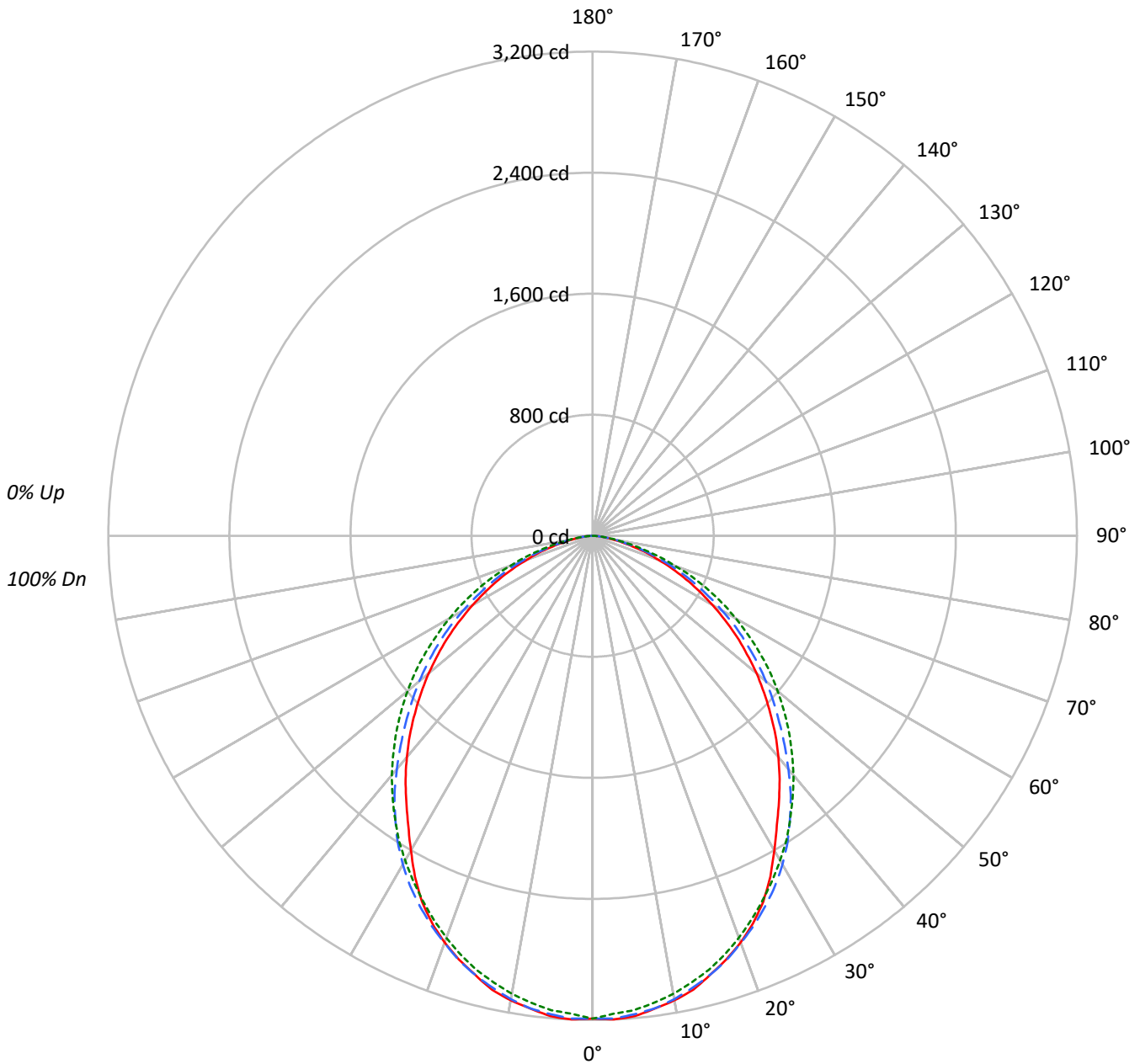
Lumens per Lamp: N/A
Luminaire Lumens: 7379.0 lumens
Efficiency: N/A
Efficacy: 105.1 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
Input Voltage (V): NR
Input Current (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									
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°	8587	8587	8587
5°	8610	8574	8501
10°	8519	8496	8398
15°	8368	8368	8272
20°	8191	8201	8096
25°	7921	8019	7892
30°	7459	7794	7699
35°	7048	7471	7483
40°	6706	7067	7253
45°	6322	6639	6980
50°	5918	6257	6682
55°	5459	5821	6321
60°	4916	5311	5879
65°	4340	4723	5347
70°	3617	4022	4543
75°	2843	3212	3556
80°	2033	2261	2507
85°	1325	1325	1250



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	300.5	4.1
10°-20°	844.1	11.4
20°-30°	1233.5	16.7
30°-40°	1400.2	19.0
40°-50°	1351.6	18.3
50°-60°	1115.0	15.1
60°-70°	742.5	10.1
70°-80°	332.3	4.5
80°-90°	59.4	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°	2378.0	32.2
0°-40°	3778.2	51.2
0°-60°	6244.8	84.6
0°-90°	7379.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7379.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3191	3191	3191	3191	3191	
5°	3188	3186	3174	3157	3147	302
15°	3004	3011	3004	2990	2969	847
25°	2668	2689	2701	2681	2658	1222
35°	2146	2175	2274	2286	2278	1344
45°	1661	1689	1745	1824	1834	1282
55°	1164	1183	1241	1309	1347	1038
65°	682	700	742	794	840	676
75°	273	288	309	324	342	299
85°	43	43	43	40	40	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3191.2	3191.2	3191.2	3191.2	3191.2
2.5°	3199.8	3201.0	3193.7	3174.1	3161.8
5°	3187.5	3186.3	3174.1	3156.9	3147.1
7.5°	3152.0	3154.4	3150.8	3126.2	3112.8
10°	3117.7	3118.9	3109.1	3089.5	3073.5
12.5°	3073.5	3072.3	3058.8	3049.0	3023.3
15°	3003.7	3011.0	3003.7	2990.2	2969.3
17.5°	2936.2	2936.2	2941.1	2917.8	2901.9
20°	2860.2	2863.9	2863.9	2845.5	2827.1
22.5°	2771.9	2783.0	2786.7	2767.0	2745.0
25°	2667.7	2688.6	2700.8	2681.2	2657.9
27.5°	2541.5	2573.3	2610.1	2595.4	2569.7
30°	2400.5	2447.1	2508.4	2496.1	2477.7
32.5°	2266.8	2313.4	2398.0	2393.1	2383.3
35°	2145.5	2174.9	2274.2	2286.5	2277.9
37.5°	2030.2	2057.2	2150.4	2178.6	2171.2
40°	1908.9	1938.3	2011.8	2062.1	2064.6
42.5°	1788.7	1816.9	1877.0	1949.3	1949.3
45°	1661.2	1689.4	1744.6	1824.3	1834.1
47.5°	1536.2	1565.6	1619.5	1699.2	1715.1
50°	1413.6	1440.5	1494.5	1571.7	1596.2
52.5°	1286.1	1315.5	1368.2	1439.3	1474.9
55°	1163.5	1183.1	1240.7	1309.3	1347.4
57.5°	1036.0	1054.3	1119.3	1178.2	1217.4
60°	913.4	936.6	986.9	1047.0	1092.3
62.5°	795.7	820.2	863.1	915.8	967.3
65°	681.6	700.0	741.7	794.4	839.8
67.5°	571.3	587.2	628.9	665.7	713.5
70°	459.7	480.6	511.2	546.8	577.4
72.5°	370.2	378.8	404.6	430.3	462.2
75°	273.4	288.1	308.9	323.7	342.0
77.5°	196.2	204.7	217.0	229.3	246.4
80°	131.2	134.9	145.9	148.3	161.8
82.5°	79.7	82.1	84.6	85.8	90.7
85°	42.9	42.9	42.9	40.5	40.5
87.5°	24.5	24.5	20.8	17.2	12.3
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)