

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: P557790

Luminaire Tested: **FUSL-12-4-LD4-3HI-35-UNV-82-97-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: P557790
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-LD4-3HI-35-UNV-82-97-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .187 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

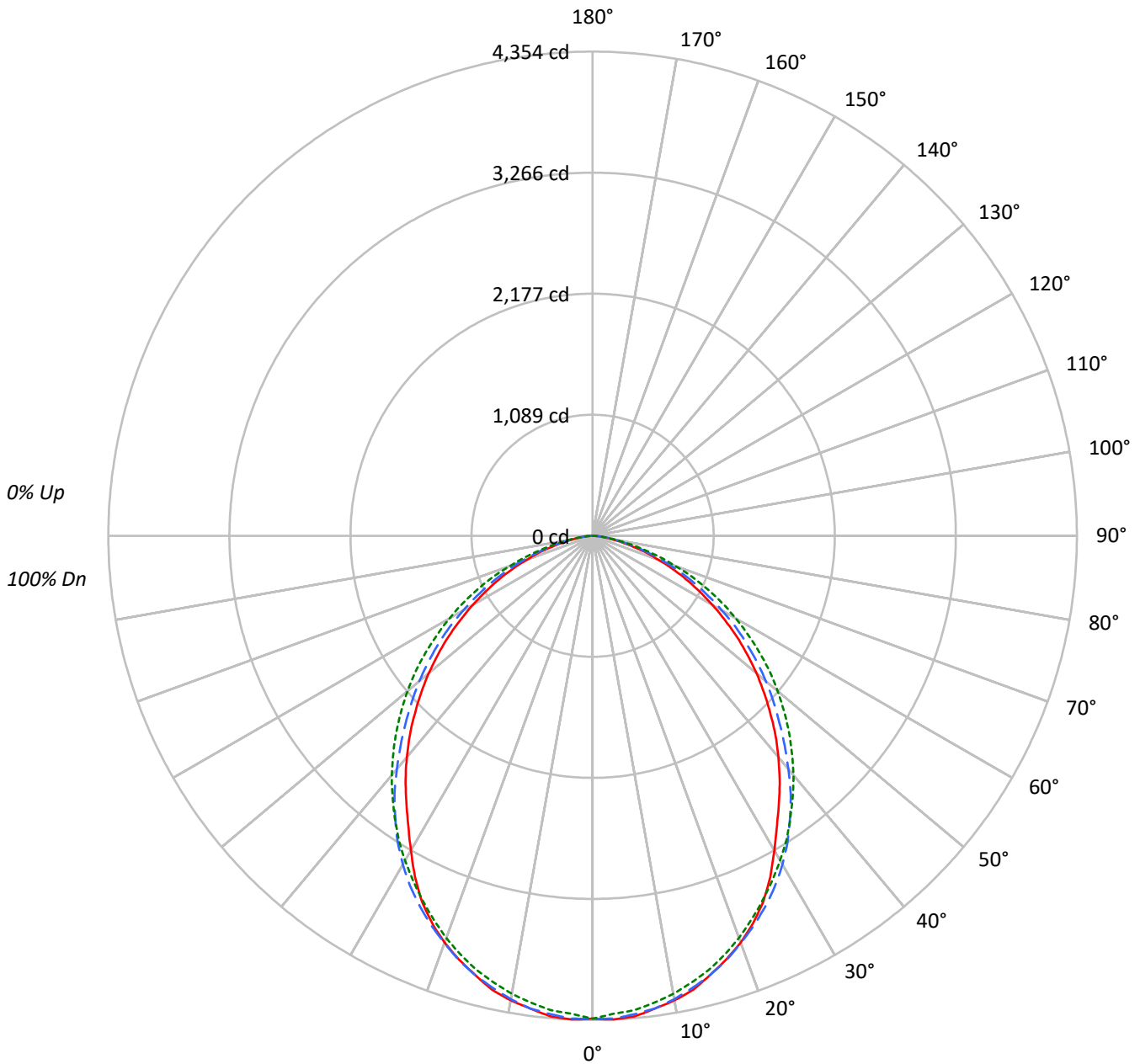
Lumens per Lamp: N/A
Luminaire Lumens: 10041.0 lumens
Efficiency: N/A
Efficacy: 77.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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					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	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	100	100	100	100		
	1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86	86	86	86	86	86		
	2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73	73	73	73	73	73		
	3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63	63	63	63	63	63		
	4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54	54	54	54	54	54		
	5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47	47	47	47	47	47		
	6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42	42	42	42	42	42		
	7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37	37	37	37	37	37		
	8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34	34	34	34	34	34		
	9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30	30	30	30	30	30		
	10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28	28	28	28	28	28		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11686	11686	11686
5°	11717	11667	11568
10°	11592	11560	11428
15°	11387	11387	11256
20°	11145	11160	11017
25°	10778	10912	10739
30°	10150	10606	10476
35°	9590	10166	10182
40°	9125	9617	9869
45°	8603	9034	9498
50°	8053	8514	9093
55°	7428	7921	8602
60°	6689	7227	8000
65°	5906	6427	7277
70°	4922	5474	6182
75°	3868	4371	4839
80°	2766	3076	3412
85°	1803	1803	1701



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	408.9	4.1
10°-20°	1148.6	11.4
20°-30°	1678.5	16.7
30°-40°	1905.2	19.0
40°-50°	1839.2	18.3
50°-60°	1517.2	15.1
60°-70°	1010.4	10.1
70°-80°	452.1	4.5
80°-90°	80.9	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°	3235.9	32.2
0°-40°	5141.2	51.2
0°-60°	8497.6	84.6
0°-90°	10041.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10041.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4342	4342	4342	4342	4342	
5°	4338	4336	4319	4296	4282	411
15°	4087	4097	4087	4069	4040	1152
25°	3630	3658	3675	3648	3617	1662
35°	2919	2960	3095	3111	3100	1829
45°	2260	2299	2374	2482	2496	1744
55°	1583	1610	1688	1782	1833	1413
65°	928	953	1009	1081	1143	920
75°	372	392	420	440	465	407
85°	58	58	58	55	55	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4342.5	4342.5	4342.5	4342.5	4342.5
2.5°	4354.2	4355.8	4345.8	4319.1	4302.4
5°	4337.5	4335.8	4319.1	4295.8	4282.4
7.5°	4289.1	4292.4	4287.4	4254.1	4235.7
10°	4242.4	4244.0	4230.7	4204.0	4182.3
12.5°	4182.3	4180.7	4162.3	4149.0	4113.9
15°	4087.2	4097.2	4087.2	4068.9	4040.5
17.5°	3995.5	3995.5	4002.1	3970.5	3948.8
20°	3892.0	3897.0	3897.0	3872.0	3847.0
22.5°	3771.9	3786.9	3791.9	3765.3	3735.2
25°	3630.1	3658.5	3675.2	3648.5	3616.8
27.5°	3458.3	3501.7	3551.7	3531.7	3496.7
30°	3266.4	3329.8	3413.3	3396.6	3371.5
32.5°	3084.6	3148.0	3263.1	3256.4	3243.1
35°	2919.4	2959.5	3094.6	3111.3	3099.6
37.5°	2762.6	2799.3	2926.1	2964.5	2954.5
40°	2597.5	2637.5	2737.6	2806.0	2809.3
42.5°	2434.0	2472.4	2554.1	2652.5	2652.5
45°	2260.5	2298.9	2373.9	2482.4	2495.7
47.5°	2090.3	2130.4	2203.8	2312.2	2333.9
50°	1923.5	1960.2	2033.6	2138.7	2172.1
52.5°	1750.0	1790.0	1861.8	1958.5	2006.9
55°	1583.2	1609.9	1688.3	1781.7	1833.4
57.5°	1409.7	1434.7	1523.1	1603.2	1656.6
60°	1242.9	1274.5	1342.9	1424.7	1486.4
62.5°	1082.7	1116.1	1174.5	1246.2	1316.3
65°	927.6	952.6	1009.3	1081.0	1142.8
67.5°	777.4	799.1	855.8	905.9	970.9
70°	625.6	654.0	695.7	744.0	785.7
72.5°	503.8	515.5	550.5	585.6	628.9
75°	372.0	392.0	420.4	440.4	465.4
77.5°	266.9	278.6	295.3	312.0	335.3
80°	178.5	183.5	198.5	201.9	220.2
82.5°	108.4	111.8	115.1	116.8	123.5
85°	58.4	58.4	58.4	55.1	55.1
87.5°	33.4	33.4	28.4	23.4	16.7
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)