

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: P557732

Luminaire Tested: **FUSL-12-4-LD4-3HI-30-UNV-93-86-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: P557732
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-30-UNV-93-86-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

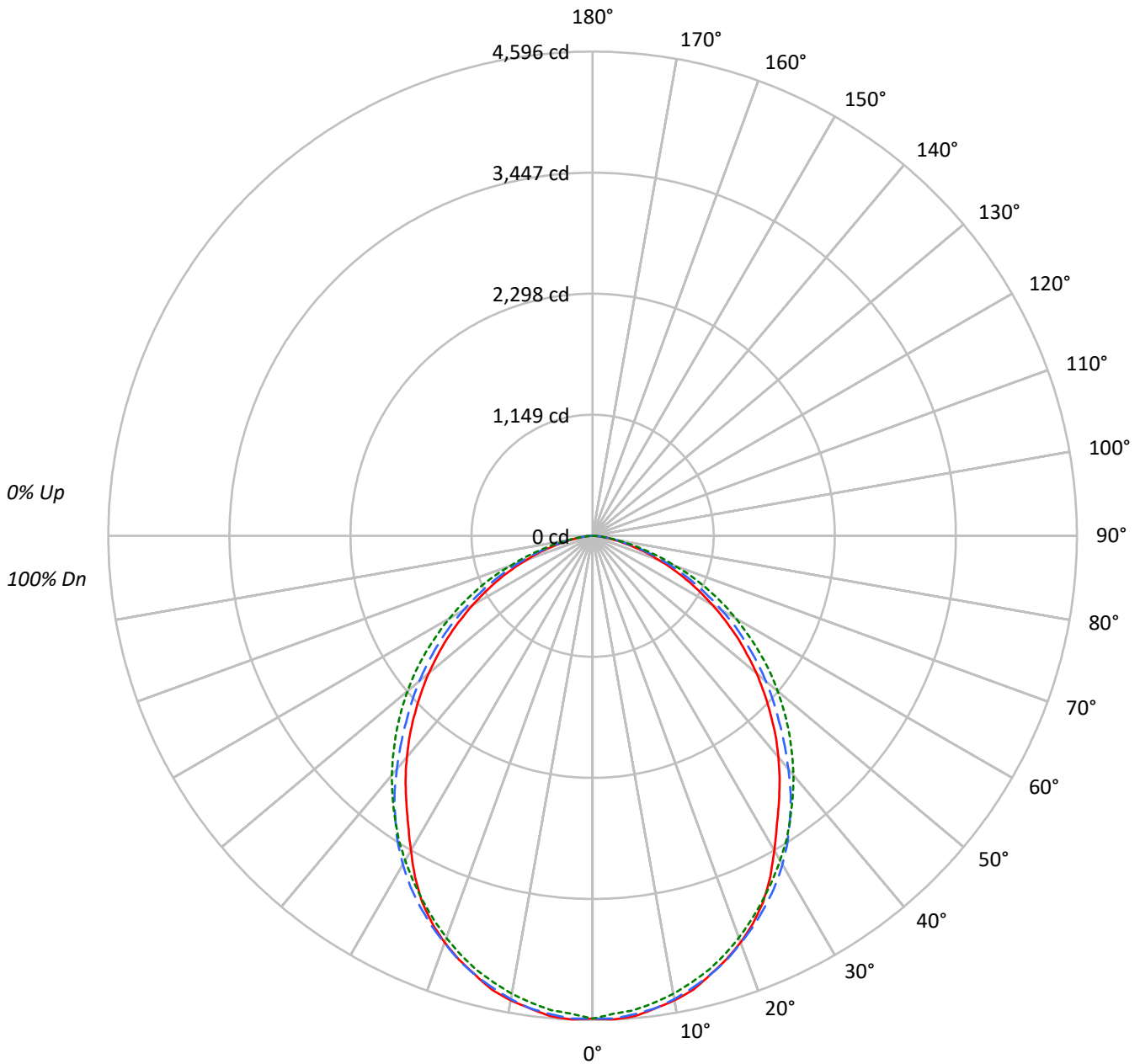
Lumens per Lamp: N/A
Luminaire Lumens: 10598.0 lumens
Efficiency: N/A
Efficacy: 81.8 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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									
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°	12334	12334	12334
5°	12367	12314	12210
10°	12235	12202	12062
15°	12018	12018	11881
20°	11764	11779	11628
25°	11376	11517	11334
30°	10713	11194	11058
35°	10123	10730	10747
40°	9631	10150	10416
45°	9080	9535	10025
50°	8499	8986	9598
55°	7840	8360	9079
60°	7060	7628	8444
65°	6234	6783	7680
70°	5195	5777	6525
75°	4083	4613	5108
80°	2920	3247	3601
85°	1902	1902	1794



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	431.5	4.1
10°-20°	1212.3	11.4
20°-30°	1771.6	16.7
30°-40°	2010.9	19.0
40°-50°	1941.3	18.3
50°-60°	1601.4	15.1
60°-70°	1066.4	10.1
70°-80°	477.2	4.5
80°-90°	85.4	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°	3415.4	32.2
0°-40°	5426.4	51.2
0°-60°	8969.0	84.6
0°-90°	10598.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10598.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4583	4583	4583	4583	4583	
5°	4578	4576	4559	4534	4520	433
15°	4314	4324	4314	4295	4265	1216
25°	3832	3861	3879	3851	3817	1755
35°	3081	3124	3266	3284	3272	1931
45°	2386	2426	2506	2620	2634	1841
55°	1671	1699	1782	1880	1935	1491
65°	979	1005	1065	1141	1206	971
75°	393	414	444	465	491	429
85°	62	62	62	58	58	83
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4583.4	4583.4	4583.4	4583.4	4583.4
2.5°	4595.7	4597.4	4586.9	4558.7	4541.1
5°	4578.1	4576.3	4558.7	4534.1	4520.0
7.5°	4527.0	4530.5	4525.3	4490.0	4470.7
10°	4477.7	4479.5	4465.4	4437.2	4414.3
12.5°	4414.3	4412.6	4393.2	4379.1	4342.1
15°	4314.0	4324.5	4314.0	4294.6	4264.7
17.5°	4217.1	4217.1	4224.2	4190.7	4167.8
20°	4107.9	4113.2	4113.2	4086.8	4060.4
22.5°	3981.2	3997.0	4002.3	3974.1	3942.4
25°	3831.5	3861.4	3879.0	3850.9	3817.4
27.5°	3650.1	3695.9	3748.7	3727.6	3690.6
30°	3447.6	3514.6	3602.6	3585.0	3558.6
32.5°	3255.7	3322.6	3444.1	3437.1	3423.0
35°	3081.4	3123.7	3266.3	3283.9	3271.6
37.5°	2915.9	2954.6	3088.4	3128.9	3118.4
40°	2741.6	2783.8	2889.5	2961.7	2965.2
42.5°	2569.0	2609.5	2695.8	2799.7	2799.7
45°	2385.9	2426.4	2505.6	2620.1	2634.2
47.5°	2206.3	2248.5	2326.0	2440.5	2463.4
50°	2030.2	2068.9	2146.4	2257.3	2292.6
52.5°	1847.1	1889.3	1965.1	2067.2	2118.2
55°	1671.0	1699.2	1781.9	1880.5	1935.1
57.5°	1487.9	1514.3	1607.6	1692.1	1748.5
60°	1311.8	1345.3	1417.4	1503.7	1568.9
62.5°	1142.8	1178.0	1239.6	1315.3	1389.3
65°	979.0	1005.4	1065.3	1141.0	1206.1
67.5°	820.5	843.4	903.3	956.1	1024.8
70°	660.3	690.2	734.3	785.3	829.3
72.5°	531.8	544.1	581.1	618.0	663.8
75°	392.7	413.8	443.7	464.9	491.3
77.5°	281.7	294.1	311.7	329.3	353.9
80°	188.4	193.7	209.5	213.1	232.4
82.5°	114.5	118.0	121.5	123.3	130.3
85°	61.6	61.6	61.6	58.1	58.1
87.5°	35.2	35.2	29.9	24.7	17.6
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)