

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: P557854

Luminaire Tested: **FUSL-12-4-LD4-3HI-40-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: P557854
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-40-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 4000K CCT
LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

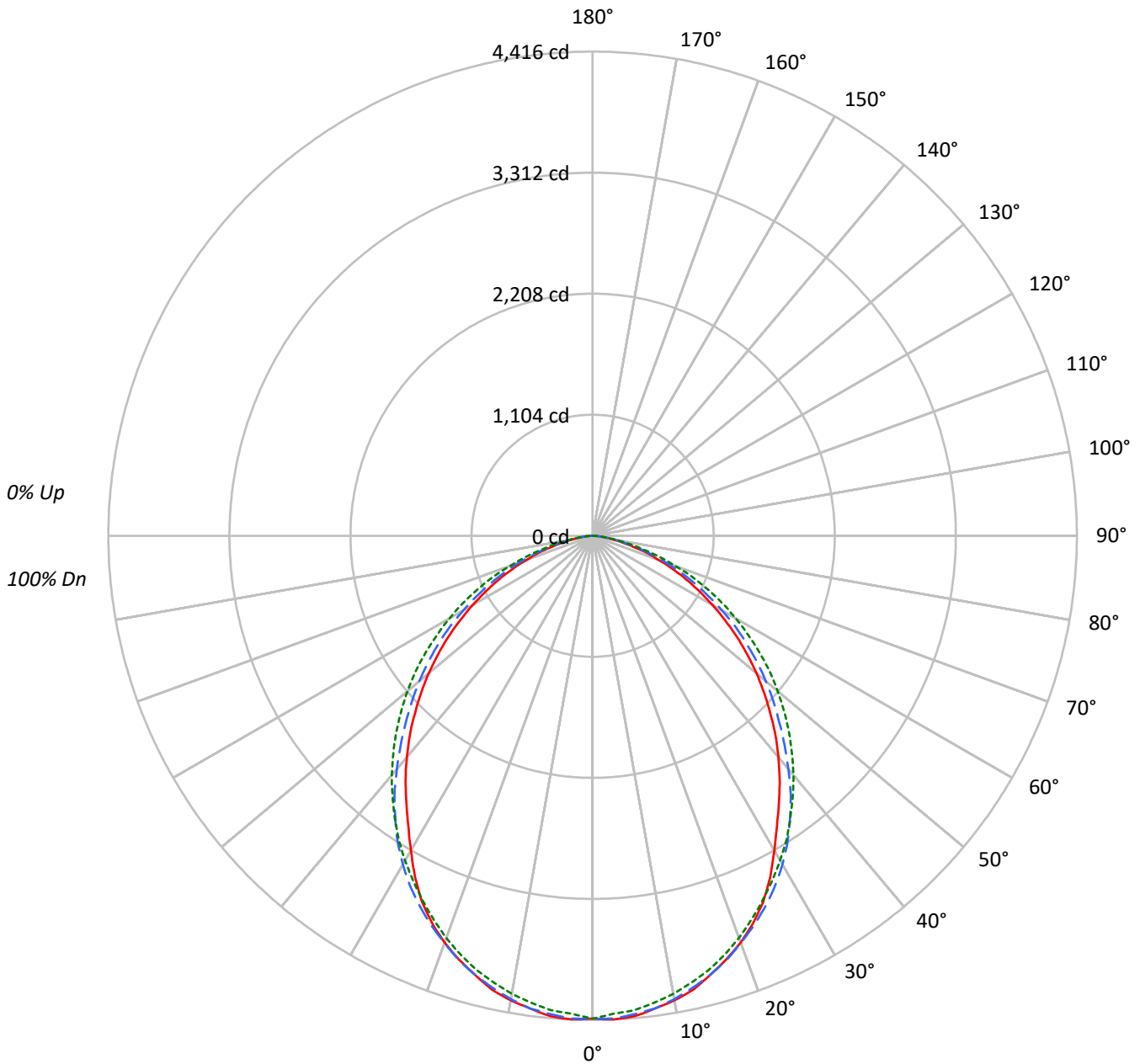
Lumens per Lamp: N/A
Luminaire Lumens: 10184.0 lumens
Efficiency: N/A
Efficacy: 78.6 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	11852	11852	11852
5°	11883	11833	11733
10°	11757	11725	11591
15°	11549	11549	11417
20°	11304	11319	11174
25°	10932	11068	10892
30°	10294	10757	10626
35°	9727	10311	10328
40°	9255	9754	10009
45°	8725	9163	9633
50°	8167	8635	9223
55°	7533	8033	8724
60°	6784	7331	8114
65°	5990	6518	7380
70°	4992	5552	6270
75°	3923	4433	4908
80°	2805	3119	3460
85°	1828	1828	1723



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	414.7	4.1
10°-20°	1165.0	11.4
20°-30°	1702.4	16.7
30°-40°	1932.4	19.0
40°-50°	1865.4	18.3
50°-60°	1538.8	15.1
60°-70°	1024.8	10.1
70°-80°	458.6	4.5
80°-90°	82.0	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°	3282.0	32.2
0°-40°	5214.4	51.2
0°-60°	8618.7	84.6
0°-90°	10184.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10184.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4404	4404	4404	4404	4404	
5°	4399	4398	4381	4357	4343	416
15°	4145	4156	4145	4127	4098	1169
25°	3682	3711	3728	3700	3668	1686
35°	2961	3002	3139	3156	3144	1855
45°	2293	2332	2408	2518	2531	1769
55°	1606	1633	1712	1807	1860	1433
65°	941	966	1024	1096	1159	933
75°	377	398	426	447	472	413
85°	59	59	59	56	56	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4404.3	4404.3	4404.3	4404.3	4404.3
2.5°	4416.2	4417.9	4407.7	4380.6	4363.7
5°	4399.2	4397.5	4380.6	4356.9	4343.4
7.5°	4350.2	4353.6	4348.5	4314.6	4296.0
10°	4302.8	4304.5	4291.0	4263.9	4241.9
12.5°	4241.9	4240.2	4221.6	4208.0	4172.5
15°	4145.4	4155.6	4145.4	4126.8	4098.1
17.5°	4052.4	4052.4	4059.1	4027.0	4005.0
20°	3947.5	3952.5	3952.5	3927.2	3901.8
22.5°	3825.6	3840.9	3846.0	3818.9	3788.4
25°	3681.8	3710.6	3727.5	3700.4	3668.3
27.5°	3507.5	3551.5	3602.3	3582.0	3546.5
30°	3313.0	3377.3	3461.9	3444.9	3419.6
32.5°	3128.5	3192.8	3309.6	3302.8	3289.3
35°	2961.0	3001.6	3138.7	3155.6	3143.8
37.5°	2802.0	2839.2	2967.8	3006.7	2996.6
40°	2634.5	2675.1	2776.6	2846.0	2849.4
42.5°	2468.7	2507.6	2590.5	2690.3	2690.3
45°	2292.7	2331.6	2407.7	2517.7	2531.3
47.5°	2120.1	2160.7	2235.2	2345.1	2367.1
50°	1950.9	1988.1	2062.6	2169.2	2203.0
52.5°	1774.9	1815.5	1888.3	1986.4	2035.5
55°	1605.7	1632.8	1712.3	1807.1	1859.5
57.5°	1429.8	1455.1	1544.8	1626.0	1680.2
60°	1260.6	1292.7	1362.1	1445.0	1507.6
62.5°	1098.1	1132.0	1191.2	1263.9	1335.0
65°	940.8	966.1	1023.7	1096.4	1159.0
67.5°	788.5	810.5	868.0	918.8	984.8
70°	634.5	663.3	705.6	754.6	796.9
72.5°	511.0	522.8	558.4	593.9	637.9
75°	377.3	397.6	426.4	446.7	472.1
77.5°	270.7	282.6	299.5	316.4	340.1
80°	181.0	186.1	201.3	204.7	223.3
82.5°	110.0	113.4	116.7	118.4	125.2
85°	59.2	59.2	59.2	55.8	55.8
87.5°	33.8	33.8	28.8	23.7	16.9
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)