

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: P557024

Luminaire Tested: **FUSL-12-4-LD4-2HI-35-UNV-93-84-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: P557024
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-LD4-2HI-35-UNV-93-84-EDD-90
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

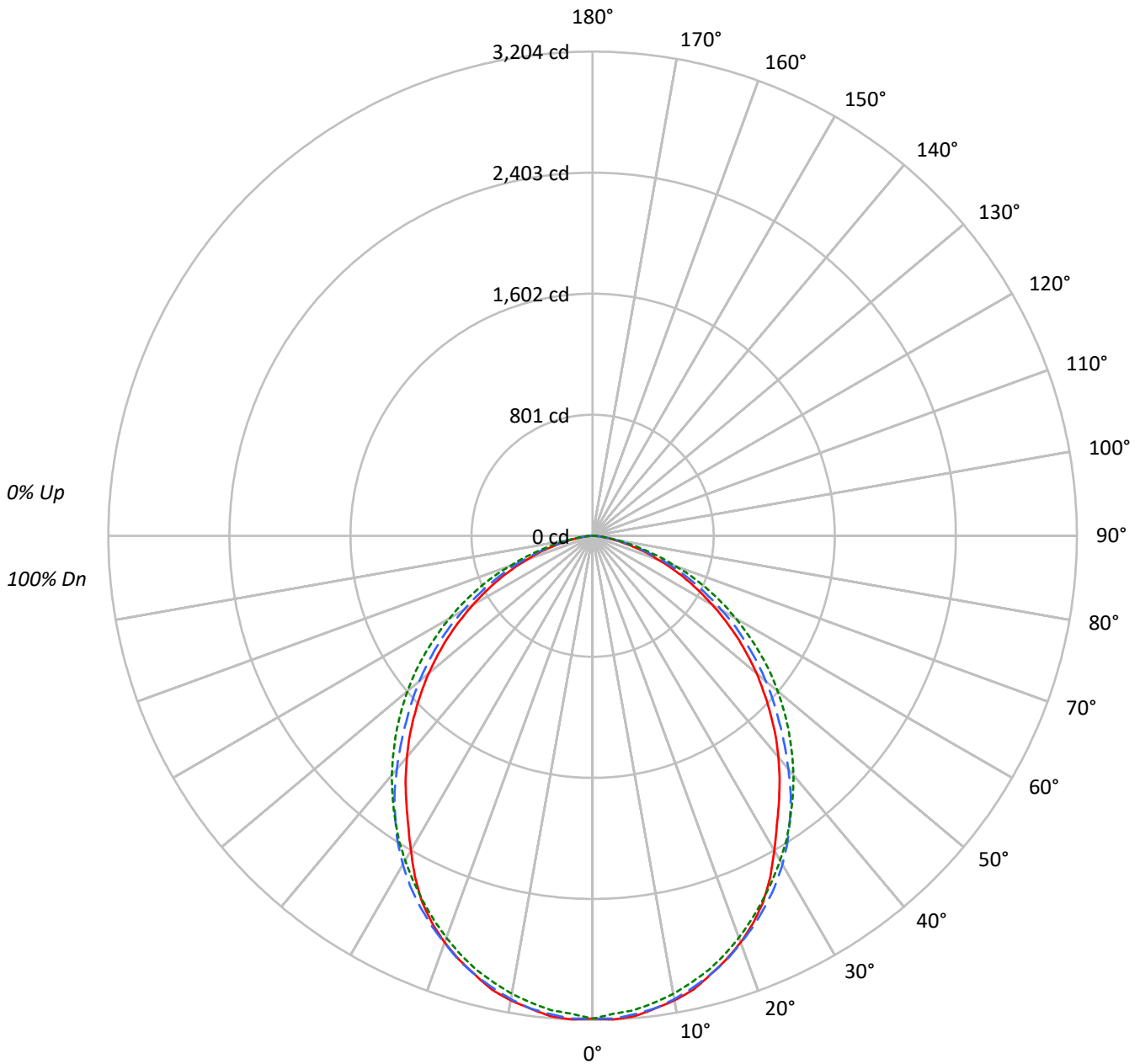
Lumens per Lamp: N/A
Luminaire Lumens: 7388.0 lumens
Efficiency: N/A
Efficacy: 85.5 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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°	8598	8598	8598
5°	8621	8584	8511
10°	8529	8506	8409
15°	8378	8378	8282
20°	8201	8211	8106
25°	7931	8029	7902
30°	7468	7804	7708
35°	7057	7480	7492
40°	6714	7076	7261
45°	6330	6647	6988
50°	5925	6264	6691
55°	5465	5828	6329
60°	4922	5318	5886
65°	4346	4728	5354
70°	3622	4028	4548
75°	2846	3216	3561
80°	2035	2264	2510
85°	1328	1328	1250



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	300.8	4.1
10°-20°	845.1	11.4
20°-30°	1235.0	16.7
30°-40°	1401.8	19.0
40°-50°	1353.3	18.3
50°-60°	1116.4	15.1
60°-70°	743.4	10.1
70°-80°	332.7	4.5
80°-90°	59.5	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°	2380.9	32.2
0°-40°	3782.8	51.2
0°-60°	6252.4	84.6
0°-90°	7388.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7388.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3195	3195	3195	3195	3195	
5°	3191	3190	3178	3161	3151	302
15°	3007	3015	3007	2994	2973	848
25°	2671	2692	2704	2684	2661	1223
35°	2148	2178	2277	2289	2281	1346
45°	1663	1692	1747	1826	1836	1283
55°	1165	1184	1242	1311	1349	1040
65°	682	701	743	795	841	677
75°	274	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°	3195.1	3195.1	3195.1	3195.1	3195.1
2.5°	3203.7	3204.9	3197.6	3177.9	3165.7
5°	3191.4	3190.2	3177.9	3160.7	3150.9
7.5°	3155.8	3158.3	3154.6	3130.1	3116.6
10°	3121.5	3122.7	3112.9	3093.2	3077.3
12.5°	3077.3	3076.1	3062.6	3052.7	3027.0
15°	3007.3	3014.7	3007.3	2993.8	2972.9
17.5°	2939.8	2939.8	2944.7	2921.4	2905.4
20°	2863.7	2867.4	2867.4	2849.0	2830.6
22.5°	2775.3	2786.4	2790.1	2770.4	2748.3
25°	2671.0	2691.9	2704.1	2684.5	2661.2
27.5°	2544.6	2576.5	2613.3	2598.6	2572.8
30°	2403.4	2450.0	2511.4	2499.1	2480.7
32.5°	2269.6	2316.2	2400.9	2396.0	2386.2
35°	2148.1	2177.5	2277.0	2289.2	2280.6
37.5°	2032.7	2059.7	2153.0	2181.2	2173.9
40°	1911.2	1940.6	2014.3	2064.6	2067.1
42.5°	1790.9	1819.1	1879.3	1951.7	1951.7
45°	1663.2	1691.5	1746.7	1826.5	1836.3
47.5°	1538.0	1567.5	1621.5	1701.3	1717.2
50°	1415.3	1442.3	1496.3	1573.6	1598.2
52.5°	1287.6	1317.1	1369.9	1441.1	1476.7
55°	1164.9	1184.5	1242.2	1310.9	1349.0
57.5°	1037.2	1055.6	1120.7	1179.6	1218.9
60°	914.5	937.8	988.1	1048.3	1093.7
62.5°	796.6	821.2	864.1	916.9	968.5
65°	682.5	700.9	742.6	795.4	840.8
67.5°	572.0	588.0	629.7	666.5	714.4
70°	460.3	481.2	511.9	547.5	578.1
72.5°	370.7	379.3	405.1	430.8	462.8
75°	273.7	288.5	309.3	324.1	342.5
77.5°	196.4	205.0	217.3	229.5	246.7
80°	131.3	135.0	146.1	148.5	162.0
82.5°	79.8	82.2	84.7	85.9	90.8
85°	43.0	43.0	43.0	40.5	40.5
87.5°	24.5	24.5	20.9	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)