

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: P557040

Luminaire Tested: **FUSL-12-4-LD4-2HI-40-UNV-80-84-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: P557040  
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-40-UNV-80-84-EDD-90  
Description: 4FT FUSL SURFACE MOUNT WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

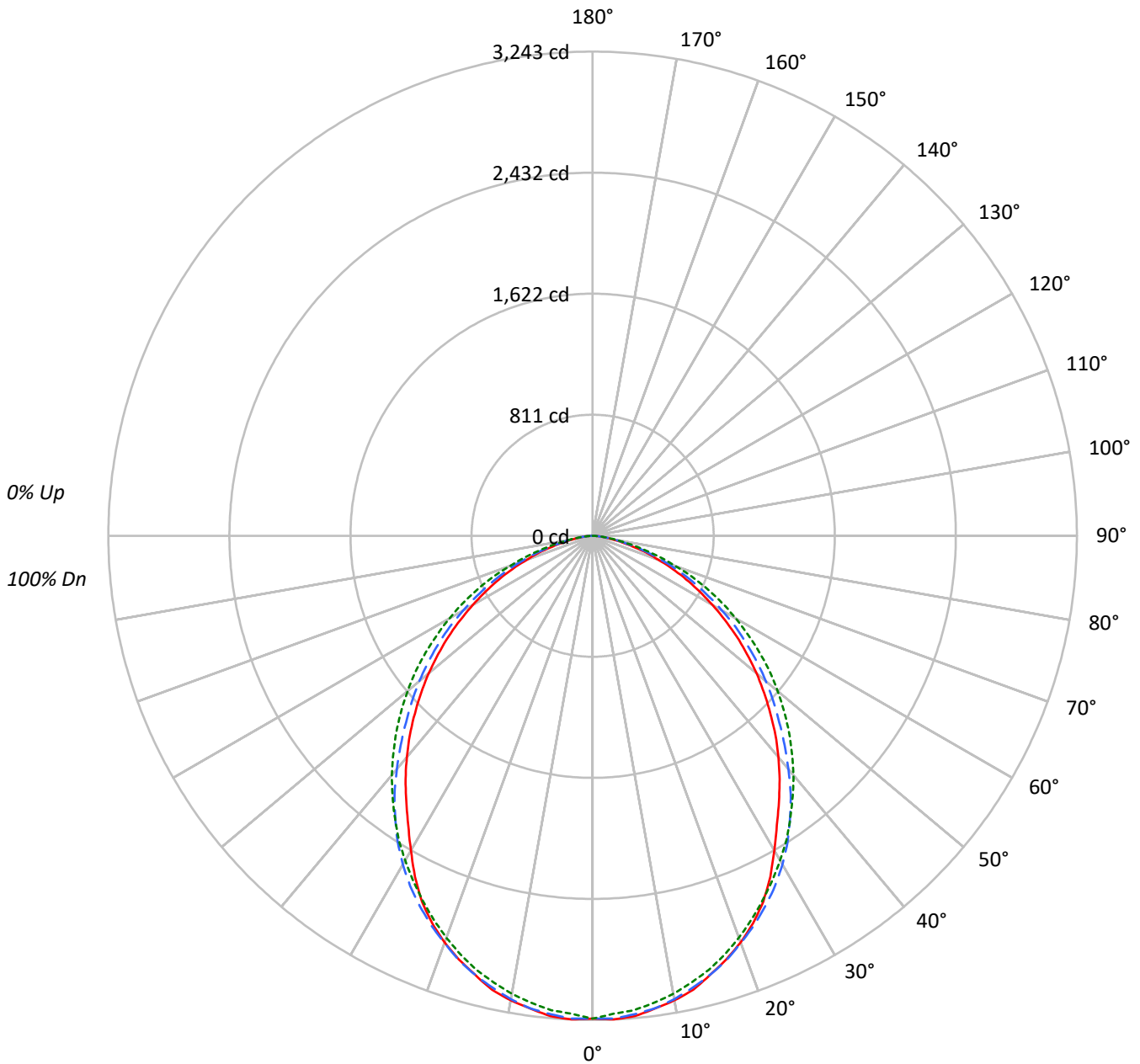
Lumens per Lamp: N/A  
Luminaire Lumens: 7478.0 lumens  
Efficiency: N/A  
Efficacy: 86.6 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 86.4  
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°	8703	8703	8703
5°	8726	8689	8615
10°	8633	8610	8511
15°	8480	8480	8383
20°	8301	8311	8204
25°	8027	8127	7998
30°	7559	7899	7802
35°	7143	7571	7583
40°	6796	7162	7350
45°	6407	6728	7074
50°	5997	6340	6772
55°	5532	5899	6406
60°	4982	5383	5958
65°	4399	4786	5419
70°	3666	4076	4604
75°	2881	3255	3604
80°	2060	2290	2541
85°	1343	1343	1266



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	304.5	4.1
10°-20°	855.4	11.4
20°-30°	1250.0	16.7
30°-40°	1418.9	19.0
40°-50°	1369.8	18.3
50°-60°	1129.9	15.1
60°-70°	752.5	10.1
70°-80°	336.7	4.5
80°-90°	60.2	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°	2409.9	32.2
0°-40°	3828.9	51.2
0°-60°	6328.6	84.6
0°-90°	7478.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7478.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3234	3234	3234	3234	3234	
5°	3230	3229	3217	3199	3189	306
15°	3044	3051	3044	3030	3009	858
25°	2704	2725	2737	2717	2694	1238
35°	2174	2204	2305	2317	2308	1362
45°	1684	1712	1768	1849	1859	1299
55°	1179	1199	1257	1327	1365	1052
65°	691	709	752	805	851	685
75°	277	292	313	328	347	303
85°	44	44	44	41	41	59
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3234.0	3234.0	3234.0	3234.0	3234.0
2.5°	3242.7	3244.0	3236.5	3216.6	3204.2
5°	3230.3	3229.1	3216.6	3199.3	3189.3
7.5°	3194.3	3196.8	3193.0	3168.2	3154.5
10°	3159.5	3160.7	3150.8	3130.9	3114.8
12.5°	3114.8	3113.5	3099.9	3089.9	3063.8
15°	3044.0	3051.4	3044.0	3030.3	3009.2
17.5°	2975.6	2975.6	2980.6	2957.0	2940.8
20°	2898.6	2902.3	2902.3	2883.7	2865.0
22.5°	2809.1	2820.3	2824.0	2804.2	2781.8
25°	2703.5	2724.6	2737.1	2717.2	2693.6
27.5°	2575.6	2607.9	2645.1	2630.2	2604.1
30°	2432.7	2479.9	2542.0	2529.6	2510.9
32.5°	2297.3	2344.5	2430.2	2425.2	2415.3
35°	2174.3	2204.1	2304.7	2317.1	2308.4
37.5°	2057.5	2084.8	2179.2	2207.8	2200.3
40°	1934.5	1964.3	2038.8	2089.8	2092.2
42.5°	1812.7	1841.3	1902.2	1975.5	1975.5
45°	1683.5	1712.1	1768.0	1848.7	1858.7
47.5°	1556.8	1586.6	1641.2	1722.0	1738.2
50°	1432.5	1459.9	1514.5	1592.8	1617.6
52.5°	1303.3	1333.1	1386.6	1458.6	1494.6
55°	1179.1	1198.9	1257.3	1326.9	1365.4
57.5°	1049.9	1068.5	1134.3	1194.0	1233.7
60°	925.6	949.2	1000.2	1061.0	1107.0
62.5°	806.3	831.2	874.7	928.1	980.3
65°	690.8	709.4	751.7	805.1	851.1
67.5°	579.0	595.1	637.4	674.6	723.1
70°	465.9	487.0	518.1	554.1	585.2
72.5°	375.2	383.9	410.0	436.1	468.4
75°	277.1	292.0	313.1	328.0	346.6
77.5°	198.8	207.5	219.9	232.3	249.7
80°	132.9	136.7	147.8	150.3	164.0
82.5°	80.8	83.2	85.7	87.0	91.9
85°	43.5	43.5	43.5	41.0	41.0
87.5°	24.8	24.8	21.1	17.4	12.4
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)