

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: P557079

Luminaire Tested: **FUSL-12-4-LD4-2HI-40-UNV-82-87-EDD**

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: P557079  
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-82-87-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

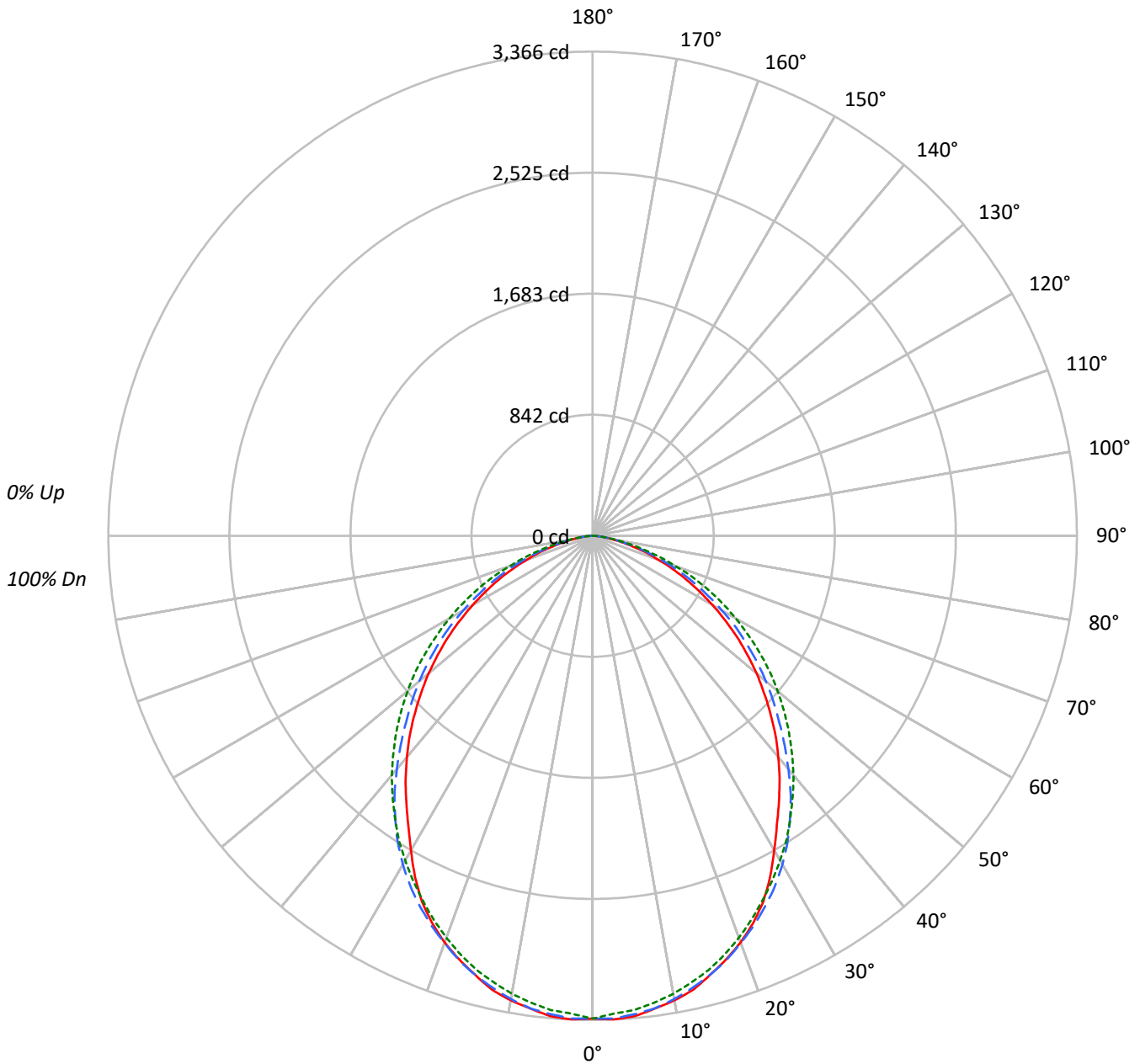
Lumens per Lamp: N/A  
Luminaire Lumens: 7761.0 lumens  
Efficiency: N/A  
Efficacy: 89.8 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 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°	9032	9032	9032
5°	9056	9018	8941
10°	8960	8935	8833
15°	8801	8801	8700
20°	8615	8626	8515
25°	8331	8435	8300
30°	7845	8198	8098
35°	7413	7858	7870
40°	7053	7433	7628
45°	6649	6983	7341
50°	6224	6580	7029
55°	5741	6122	6648
60°	5170	5586	6183
65°	4565	4967	5624
70°	3804	4231	4778
75°	2989	3378	3741
80°	2139	2377	2638
85°	1392	1392	1315



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	316.0	4.1
10°-20°	887.8	11.4
20°-30°	1297.3	16.7
30°-40°	1472.6	19.0
40°-50°	1421.6	18.3
50°-60°	1172.7	15.1
60°-70°	780.9	10.1
70°-80°	349.4	4.5
80°-90°	62.5	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°	2501.1	32.2
0°-40°	3973.8	51.2
0°-60°	6568.1	84.6
0°-90°	7761.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7761.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3356	3356	3356	3356	3356	
5°	3353	3351	3338	3320	3310	317
15°	3159	3167	3159	3145	3123	891
25°	2806	2828	2841	2820	2796	1285
35°	2256	2288	2392	2405	2396	1414
45°	1747	1777	1835	1919	1929	1348
55°	1224	1244	1305	1377	1417	1092
65°	717	736	780	836	883	711
75°	288	303	325	340	360	314
85°	45	45	45	43	43	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3356.4	3356.4	3356.4	3356.4	3356.4
2.5°	3365.5	3366.7	3359.0	3338.4	3325.5
5°	3352.6	3351.3	3338.4	3320.3	3310.0
7.5°	3315.2	3317.7	3313.9	3288.1	3273.9
10°	3279.1	3280.4	3270.0	3249.4	3232.6
12.5°	3232.6	3231.4	3217.2	3206.9	3179.8
15°	3159.1	3166.9	3159.1	3145.0	3123.0
17.5°	3088.2	3088.2	3093.4	3068.9	3052.1
20°	3008.3	3012.1	3012.1	2992.8	2973.5
22.5°	2915.4	2927.0	2930.9	2910.3	2887.1
25°	2805.8	2827.8	2840.7	2820.0	2795.5
27.5°	2673.0	2706.6	2745.2	2729.8	2702.7
30°	2524.7	2573.7	2638.2	2625.3	2606.0
32.5°	2384.2	2433.2	2522.2	2517.0	2506.7
35°	2256.5	2287.5	2391.9	2404.8	2395.8
37.5°	2135.3	2163.7	2261.7	2291.3	2283.6
40°	2007.7	2038.6	2116.0	2168.9	2171.4
42.5°	1881.3	1911.0	1974.1	2050.2	2050.2
45°	1747.2	1776.9	1834.9	1918.7	1929.0
47.5°	1615.7	1646.6	1703.4	1787.2	1803.9
50°	1486.7	1515.1	1571.8	1653.1	1678.9
52.5°	1352.6	1383.6	1439.0	1513.8	1551.2
55°	1223.7	1244.3	1304.9	1377.1	1417.1
57.5°	1089.6	1108.9	1177.3	1239.2	1280.4
60°	960.6	985.1	1038.0	1101.2	1148.9
62.5°	836.9	862.6	907.8	963.2	1017.4
65°	716.9	736.3	780.1	835.6	883.3
67.5°	600.9	617.6	661.5	700.2	750.5
70°	483.5	505.5	537.7	575.1	607.3
72.5°	389.4	398.4	425.5	452.6	486.1
75°	287.5	303.0	324.9	340.4	359.8
77.5°	206.3	215.3	228.2	241.1	259.2
80°	138.0	141.8	153.4	156.0	170.2
82.5°	83.8	86.4	89.0	90.3	95.4
85°	45.1	45.1	45.1	42.6	42.6
87.5°	25.8	25.8	21.9	18.1	12.9
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)