

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: P558291

Luminaire Tested: **FUSL-12-4-LD4-3STD-35-UNV-82-85-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: P558291  
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-LD4-3STD-35-UNV-82-85-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

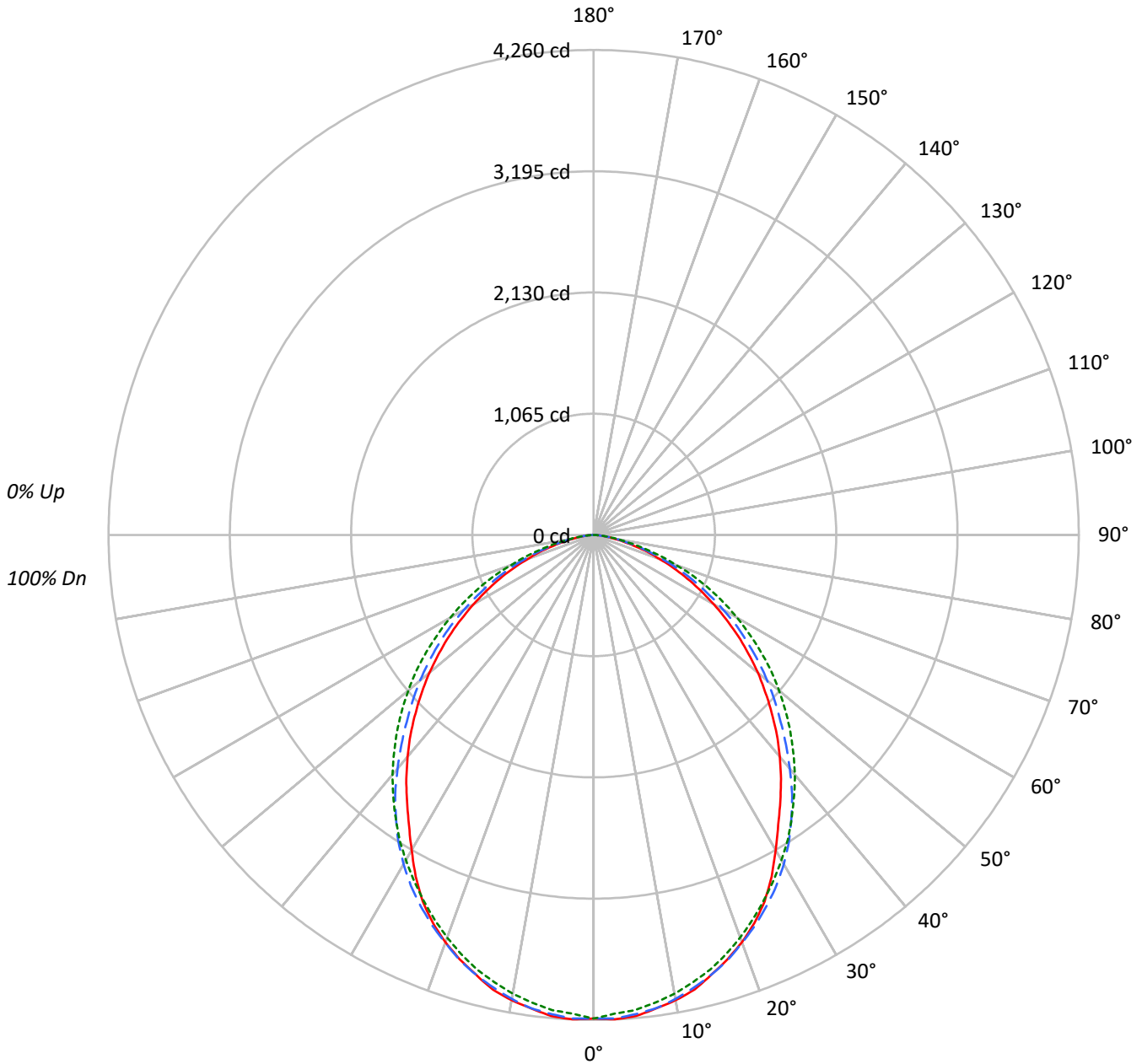
Lumens per Lamp: N/A  
Luminaire Lumens: 9823.0 lumens  
Efficiency: N/A  
Efficacy: 98.3 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
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°	11432	11432	11432
5°	11462	11414	11317
10°	11341	11309	11180
15°	11139	11139	11012
20°	10903	10917	10777
25°	10544	10675	10506
30°	9929	10376	10249
35°	9383	9945	9961
40°	8926	9408	9655
45°	8416	8838	9291
50°	7878	8329	8896
55°	7266	7749	8415
60°	6544	7071	7826
65°	5778	6287	7118
70°	4815	5355	6048
75°	3784	4276	4734
80°	2706	3009	3338
85°	1763	1763	1664



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	400.0	4.1
10°-20°	1123.7	11.4
20°-30°	1642.0	16.7
30°-40°	1863.9	19.0
40°-50°	1799.3	18.3
50°-60°	1484.3	15.1
60°-70°	988.4	10.1
70°-80°	442.3	4.5
80°-90°	79.1	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°	3165.7	32.2
0°-40°	5029.6	51.2
0°-60°	8313.1	84.6
0°-90°	9823.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9823.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4248	4248	4248	4248	4248	
5°	4243	4242	4225	4202	4189	402
15°	3998	4008	3998	3980	3953	1127
25°	3551	3579	3595	3569	3538	1626
35°	2856	2895	3027	3044	3032	1789
45°	2211	2249	2322	2428	2442	1706
55°	1549	1575	1652	1743	1794	1382
65°	907	932	987	1058	1118	900
75°	364	384	411	431	455	398
85°	57	57	57	54	54	77
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4248.2	4248.2	4248.2	4248.2	4248.2
2.5°	4259.6	4261.3	4251.5	4225.3	4209.0
5°	4243.3	4241.7	4225.3	4202.5	4189.4
7.5°	4196.0	4199.2	4194.3	4161.7	4143.7
10°	4150.3	4151.9	4138.8	4112.7	4091.5
12.5°	4091.5	4089.9	4071.9	4058.9	4024.6
15°	3998.5	4008.3	3998.5	3980.5	3952.8
17.5°	3908.7	3908.7	3915.3	3884.2	3863.0
20°	3807.5	3812.4	3812.4	3788.0	3763.5
22.5°	3690.0	3704.7	3709.6	3683.5	3654.1
25°	3551.3	3579.1	3595.4	3569.3	3538.3
27.5°	3383.2	3425.6	3474.6	3455.0	3420.8
30°	3195.5	3257.5	3339.1	3322.8	3298.3
32.5°	3017.6	3079.7	3192.3	3185.7	3172.7
35°	2856.1	2895.2	3027.4	3043.8	3032.3
37.5°	2702.7	2738.6	2862.6	2900.1	2890.3
40°	2541.1	2580.3	2678.2	2745.1	2748.4
42.5°	2381.1	2418.7	2498.6	2594.9	2594.9
45°	2211.4	2248.9	2322.4	2428.5	2441.5
47.5°	2044.9	2084.1	2155.9	2262.0	2283.2
50°	1881.7	1917.6	1989.5	2092.3	2124.9
52.5°	1712.0	1751.2	1821.4	1916.0	1963.3
55°	1548.8	1574.9	1651.6	1743.0	1793.6
57.5°	1379.1	1403.6	1490.1	1568.4	1620.6
60°	1215.9	1246.9	1313.8	1393.8	1454.1
62.5°	1059.2	1091.8	1149.0	1219.1	1287.7
65°	907.4	931.9	987.4	1057.6	1117.9
67.5°	760.5	781.7	837.2	886.2	949.8
70°	612.0	639.8	680.6	727.9	768.7
72.5°	492.9	504.3	538.6	572.8	615.3
75°	363.9	383.5	411.3	430.9	455.3
77.5°	261.1	272.6	288.9	305.2	328.0
80°	174.6	179.5	194.2	197.5	215.4
82.5°	106.1	109.3	112.6	114.2	120.8
85°	57.1	57.1	57.1	53.9	53.9
87.5°	32.6	32.6	27.7	22.8	16.3
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)