

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: P558368

Luminaire Tested: **FUSL-12-4-LD4-3STD-40-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: P558368  
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-40-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 4000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

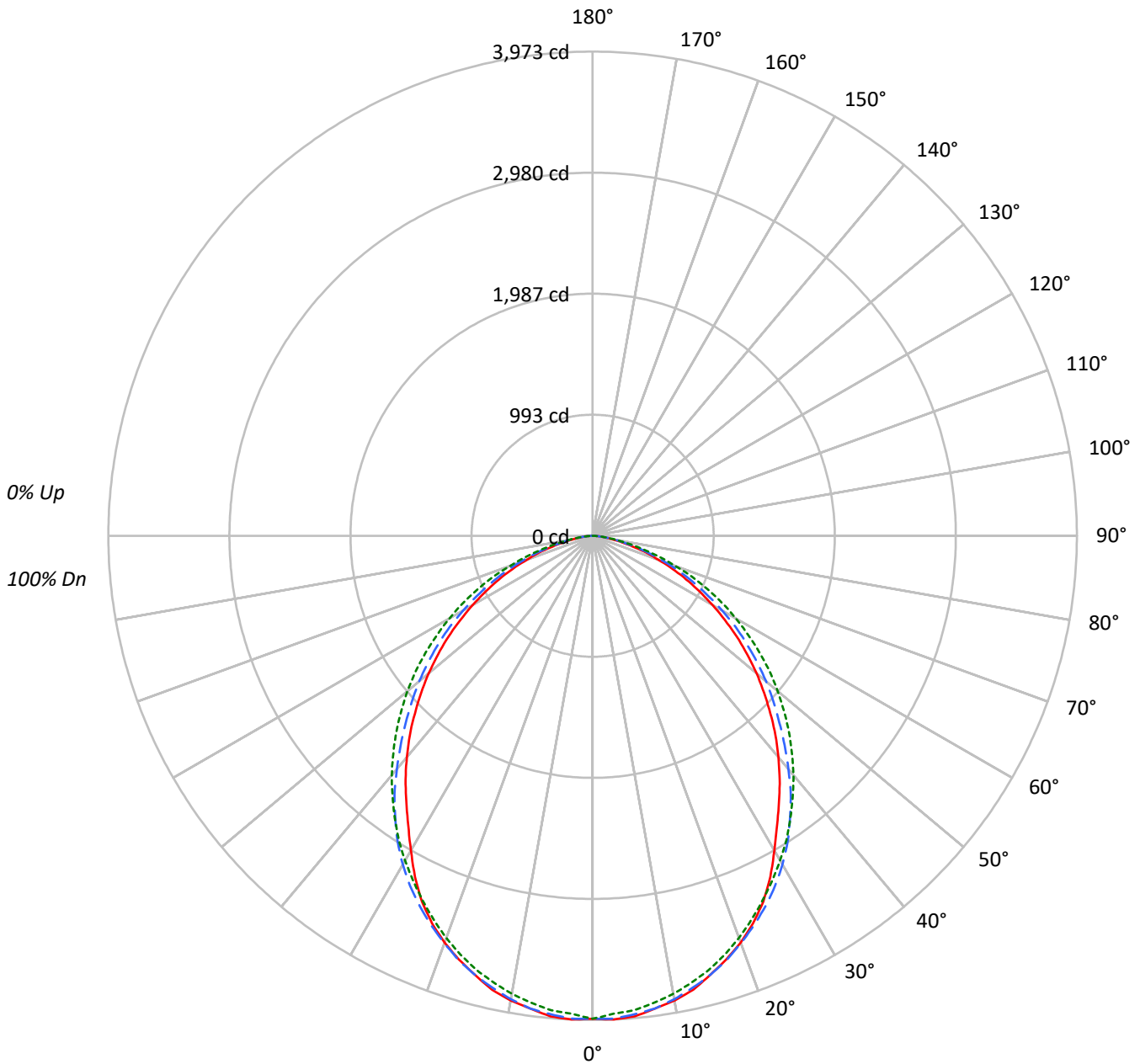
Lumens per Lamp: N/A  
Luminaire Lumens: 9163.0 lumens  
Efficiency: N/A  
Efficacy: 91.7 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 99.9  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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					20					
RC	80					70					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	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86					86			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	75	73					73			
3	92	83	75	69	90	81	74	68	78	72	67	75	70	66	73	69	65	63					63			
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	61	56	54					54			
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	50	47					47			
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	42					42			
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	37					37			
8	63	50	42	36	61	49	41	36	48	41	36	47	40	36	46	40	35	34					34			
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	30					30			
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	33	29	28					28			

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10664	10664	10664
5°	10692	10647	10557
10°	10579	10550	10429
15°	10391	10391	10272
20°	10171	10184	10053
25°	9836	9958	9800
30°	9262	9679	9560
35°	8752	9277	9292
40°	8326	8776	9006
45°	7850	8244	8667
50°	7348	7769	8298
55°	6778	7228	7849
60°	6104	6596	7300
65°	5389	5864	6640
70°	4492	4995	5641
75°	3530	3988	4416
80°	2524	2808	3115
85°	1646	1646	1550



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	373.1	4.1
10°-20°	1048.2	11.4
20°-30°	1531.7	16.7
30°-40°	1738.7	19.0
40°-50°	1678.4	18.3
50°-60°	1384.6	15.1
60°-70°	922.0	10.1
70°-80°	412.6	4.5
80°-90°	73.8	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°	2953.0	32.2
0°-40°	4691.6	51.2
0°-60°	7754.6	84.6
0°-90°	9163.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9163.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3963	3963	3963	3963	3963	
5°	3958	3957	3941	3920	3908	375
15°	3730	3739	3730	3713	3687	1051
25°	3313	3339	3354	3329	3300	1517
35°	2664	2701	2824	2839	2829	1669
45°	2063	2098	2166	2265	2278	1592
55°	1445	1469	1541	1626	1673	1289
65°	846	869	921	986	1043	839
75°	340	358	384	402	425	371
85°	53	53	53	50	50	72
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3962.8	3962.8	3962.8	3962.8	3962.8
2.5°	3973.4	3974.9	3965.8	3941.4	3926.2
5°	3958.2	3956.7	3941.4	3920.1	3908.0
7.5°	3914.0	3917.1	3912.5	3882.1	3865.3
10°	3871.4	3872.9	3860.8	3836.4	3816.6
12.5°	3816.6	3815.1	3798.3	3786.2	3754.2
15°	3729.8	3739.0	3729.8	3713.1	3687.2
17.5°	3646.1	3646.1	3652.2	3623.3	3603.5
20°	3551.7	3556.3	3556.3	3533.4	3510.6
22.5°	3442.1	3455.8	3460.4	3436.0	3408.6
25°	3312.7	3338.6	3353.8	3329.4	3300.5
27.5°	3155.9	3195.5	3241.2	3222.9	3190.9
30°	2980.8	3038.7	3114.8	3099.6	3076.7
32.5°	2814.9	2872.7	2977.8	2971.7	2959.5
35°	2664.2	2700.7	2824.0	2839.2	2828.6
37.5°	2521.1	2554.6	2670.3	2705.3	2696.1
40°	2370.3	2406.9	2498.2	2560.6	2563.7
42.5°	2221.2	2256.2	2330.8	2420.6	2420.6
45°	2062.8	2097.8	2166.3	2265.3	2277.5
47.5°	1907.5	1944.1	2011.1	2110.0	2129.8
50°	1755.3	1788.8	1855.8	1951.7	1982.1
52.5°	1597.0	1633.5	1699.0	1787.3	1831.4
55°	1444.7	1469.1	1540.7	1625.9	1673.1
57.5°	1286.4	1309.2	1389.9	1463.0	1511.7
60°	1134.2	1163.1	1225.5	1300.1	1356.4
62.5°	988.0	1018.5	1071.8	1137.2	1201.2
65°	846.4	869.3	921.0	986.5	1042.8
67.5°	709.4	729.2	781.0	826.7	886.0
70°	570.9	596.8	634.8	679.0	717.0
72.5°	459.8	470.4	502.4	534.4	573.9
75°	339.5	357.8	383.6	401.9	424.7
77.5°	243.6	254.2	269.5	284.7	306.0
80°	162.9	167.5	181.2	184.2	201.0
82.5°	99.0	102.0	105.0	106.6	112.7
85°	53.3	53.3	53.3	50.2	50.2
87.5°	30.4	30.4	25.9	21.3	15.2
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)