

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: P557155

Luminaire Tested: **FUSL-12-4-LD4-2HI-50-UNV-93-85-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: P557155
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-50-UNV-93-85-EDD
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

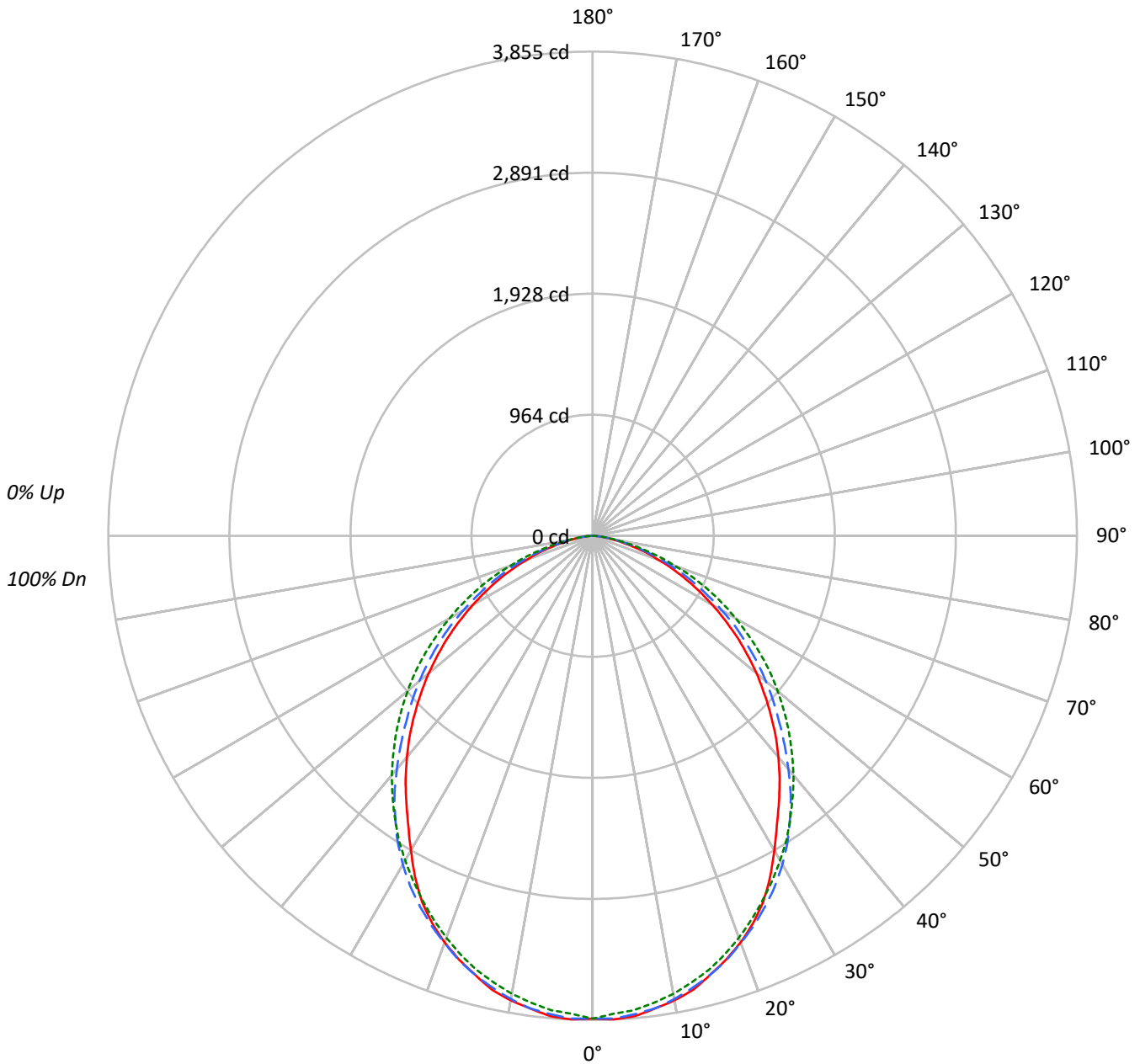
Lumens per Lamp: N/A
Luminaire Lumens: 8889.0 lumens
Efficiency: N/A
Efficacy: 102.9 lumens/watt
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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°	10345	10345	10345
5°	10372	10329	10241
10°	10262	10234	10117
15°	10080	10080	9965
20°	9867	9879	9753
25°	9542	9660	9507
30°	8985	9389	9274
35°	8490	9000	9014
40°	8078	8513	8736
45°	7615	7998	8408
50°	7129	7537	8050
55°	6575	7012	7615
60°	5922	6399	7082
65°	5228	5689	6441
70°	4357	4846	5473
75°	3424	3870	4284
80°	2448	2723	3020
85°	1596	1596	1504



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	361.9	4.1
10°-20°	1016.8	11.4
20°-30°	1485.9	16.7
30°-40°	1686.7	19.0
40°-50°	1628.2	18.3
50°-60°	1343.2	15.1
60°-70°	894.4	10.1
70°-80°	400.3	4.5
80°-90°	71.6	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°	2864.7	32.2
0°-40°	4551.3	51.2
0°-60°	7522.7	84.6
0°-90°	8889.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8889.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3844	3844	3844	3844	3844	
5°	3840	3838	3824	3803	3791	363
15°	3618	3627	3618	3602	3577	1020
25°	3214	3239	3254	3230	3202	1472
35°	2584	2620	2740	2754	2744	1619
45°	2001	2035	2102	2198	2209	1544
55°	1402	1425	1495	1577	1623	1251
65°	821	843	894	957	1012	814
75°	329	347	372	390	412	360
85°	52	52	52	49	49	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3844.3	<i>3844.3</i>	3844.3	3844.3	3844.3
2.5°	<i>3854.6</i>	<i>3856.1</i>	<i>3847.2</i>	<i>3823.6</i>	<i>3808.8</i>
5°	3839.8	<i>3838.4</i>	3823.6	3802.9	3791.1
7.5°	3797.0	<i>3800.0</i>	3795.5	3766.0	3749.7
10°	3755.7	<i>3757.1</i>	3745.3	3721.7	3702.5
12.5°	3702.5	<i>3701.0</i>	3684.8	3672.9	3641.9
15°	3618.3	<i>3627.2</i>	3618.3	3602.1	3577.0
17.5°	3537.1	<i>3537.1</i>	3543.0	3514.9	3495.7
20°	3445.5	<i>3449.9</i>	3449.9	3427.8	3405.6
22.5°	3339.2	<i>3352.5</i>	3356.9	3333.3	3306.7
25°	3213.6	<i>3238.8</i>	3253.5	3229.9	3201.8
27.5°	3061.5	<i>3099.9</i>	3144.2	3126.5	3095.5
30°	2891.7	<i>2947.8</i>	3021.7	3006.9	2984.7
32.5°	2730.7	<i>2786.8</i>	2888.7	2882.8	2871.0
35°	2584.5	<i>2619.9</i>	2739.6	2754.3	2744.0
37.5°	2445.7	<i>2478.2</i>	2590.4	2624.4	2615.5
40°	2299.5	<i>2334.9</i>	2423.5	2484.1	2487.0
42.5°	2154.7	<i>2188.7</i>	2261.1	2348.2	2348.2
45°	2001.1	<i>2035.1</i>	2101.6	2197.6	2209.4
47.5°	1850.5	<i>1885.9</i>	1950.9	2046.9	2066.1
50°	1702.8	<i>1735.3</i>	1800.3	1893.3	1922.9
52.5°	1549.2	<i>1584.7</i>	1648.2	1733.8	1776.7
55°	1401.5	<i>1425.2</i>	1494.6	1577.3	1623.1
57.5°	1247.9	<i>1270.1</i>	1348.4	1419.3	1466.5
60°	1100.3	<i>1128.3</i>	1188.9	1261.2	1315.9
62.5°	958.5	<i>988.0</i>	1039.7	1103.2	1165.2
65°	821.1	<i>843.3</i>	893.5	957.0	1011.6
67.5°	688.2	<i>707.4</i>	757.6	801.9	859.5
70°	553.8	<i>578.9</i>	615.9	658.7	695.6
72.5°	446.0	<i>456.3</i>	487.4	518.4	556.8
75°	329.3	<i>347.1</i>	372.2	389.9	412.0
77.5°	236.3	<i>246.6</i>	261.4	276.2	296.8
80°	158.0	<i>162.5</i>	175.7	178.7	194.9
82.5°	96.0	<i>98.9</i>	101.9	103.4	109.3
85°	51.7	<i>51.7</i>	51.7	48.7	48.7
87.5°	29.5	<i>29.5</i>	25.1	20.7	14.8
90°	0.0	<i>0.0</i>	0.0	0.0	0.0



Report Generated By 670246072 / DESKTOP-MV3F9LC





— 0°-180° - - 45°-225° - - - - 90°-270°







(END OF REPORT)