

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: P556385

Luminaire Tested: **FUSL-12-4-LD4-1HI-50-UNV-93-84-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: P556385  
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-LD4-1HI-50-UNV-93-84-EDD  
Description: 4FT FUSL SURFACE MOUNT WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.   Condition   Description

**Summary**

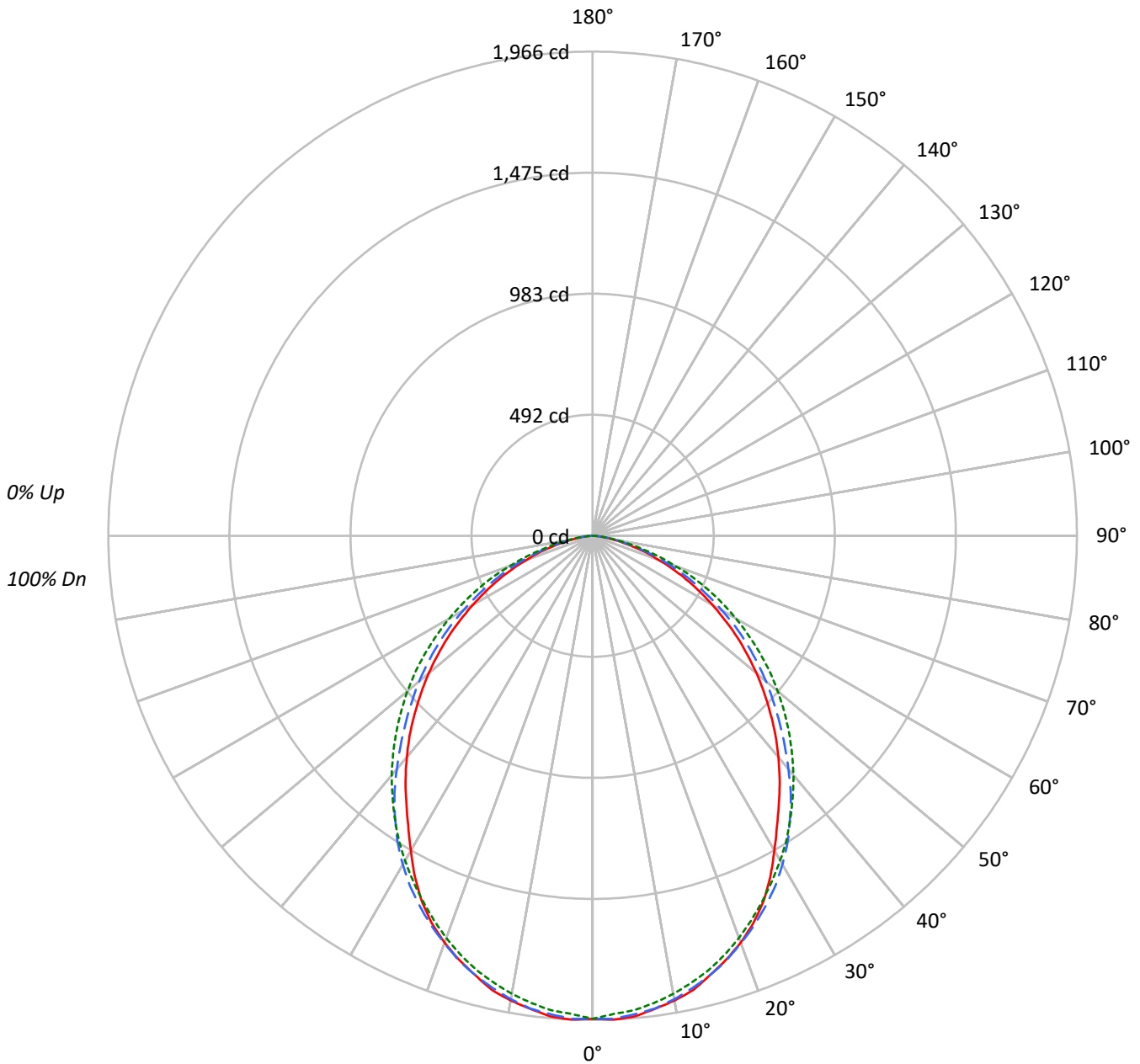
Lumens per Lamp: N/A  
Luminaire Lumens: 4535.0 lumens  
Efficiency: N/A  
Efficacy: 105.0 lumens/watt  
Spacing Criteria (0/90/45): 1.13 / 1.16 / 1.26  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 43.2  
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

TEST NUMBER: P556385

CATALOG NUMBER: FUSL-12-4-LD4-1HI-50-UNV-93-84-EDD

### Luminous Intensity Polar Plot





TEST NUMBER: P556385

CATALOG NUMBER: FUSL-12-4-LD4-1HI-50-UNV-93-84-EDD

**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°	5278	5278	5278
5°	5292	5269	5225
10°	5236	5221	5161
15°	5143	5143	5084
20°	5034	5040	4976
25°	4868	4929	4850
30°	4584	4790	4732
35°	4332	4592	4599
40°	4121	4343	4457
45°	3885	4080	4290
50°	3637	3845	4107
55°	3354	3577	3885
60°	3021	3264	3613
65°	2667	2902	3286
70°	2223	2472	2792
75°	1747	1974	2185
80°	1249	1390	1542
85°	815	815	769



TEST NUMBER: P556385

CATALOG NUMBER: FUSL-12-4-LD4-1HI-50-UNV-93-84-EDD

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	184.7	4.1
10°-20°	518.8	11.4
20°-30°	758.1	16.7
30°-40°	860.5	19.0
40°-50°	830.7	18.3
50°-60°	685.3	15.1
60°-70°	456.3	10.1
70°-80°	204.2	4.5
80°-90°	36.5	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°	1461.5	32.2
0°-40°	2322.0	51.2
0°-60°	3837.9	84.6
0°-90°	4535.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4535.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1961	1961	1961	1961	1961	
5°	1959	1958	1951	1940	1934	185
15°	1846	1850	1846	1838	1825	520
25°	1640	1652	1660	1648	1634	751
35°	1319	1337	1398	1405	1400	826
45°	1021	1038	1072	1121	1127	788
55°	715	727	762	805	828	638
65°	419	430	456	488	516	415
75°	168	177	190	199	210	184
85°	26	26	26	25	25	36
90°	0	0	0	0	0	



TEST NUMBER: P556385

CATALOG NUMBER: FUSL-12-4-LD4-1HI-50-UNV-93-84-EDD

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1961.3	1961.3	1961.3	1961.3	1961.3
2.5°	1966.5	1967.3	1962.8	1950.7	1943.2
5°	1959.0	1958.3	1950.7	1940.2	1934.1
7.5°	1937.2	1938.7	1936.4	1921.3	1913.0
10°	1916.1	1916.8	1910.8	1898.7	1888.9
12.5°	1888.9	1888.2	1879.9	1873.9	1858.0
15°	1846.0	1850.5	1846.0	1837.7	1824.9
17.5°	1804.5	1804.5	1807.6	1793.2	1783.5
20°	1757.8	1760.1	1760.1	1748.8	1737.5
22.5°	1703.6	1710.4	1712.6	1700.6	1687.0
25°	1639.5	1652.3	1659.9	1647.8	1633.5
27.5°	1561.9	1581.5	1604.1	1595.1	1579.3
30°	1475.3	1503.9	1541.6	1534.1	1522.8
32.5°	1393.2	1421.8	1473.8	1470.8	1464.7
35°	1318.6	1336.6	1397.7	1405.2	1399.9
37.5°	1247.7	1264.3	1321.6	1338.9	1334.4
40°	1173.1	1191.2	1236.4	1267.3	1268.8
42.5°	1099.3	1116.6	1153.6	1198.0	1198.0
45°	1020.9	1038.3	1072.2	1121.2	1127.2
47.5°	944.1	962.2	995.3	1044.3	1054.1
50°	868.7	885.3	918.5	965.9	981.0
52.5°	790.4	808.5	840.9	884.6	906.4
55°	715.0	727.1	762.5	804.7	828.1
57.5°	636.7	648.0	687.9	724.1	748.2
60°	561.3	575.6	606.5	643.5	671.3
62.5°	489.0	504.1	530.4	562.8	594.5
65°	418.9	430.2	455.8	488.2	516.1
67.5°	351.1	360.9	386.5	409.1	438.5
70°	282.5	295.4	314.2	336.0	354.9
72.5°	227.5	232.8	248.6	264.5	284.1
75°	168.0	177.1	189.9	198.9	210.2
77.5°	120.6	125.8	133.4	140.9	151.4
80°	80.6	82.9	89.7	91.2	99.5
82.5°	49.0	50.5	52.0	52.7	55.8
85°	26.4	26.4	26.4	24.9	24.9
87.5°	15.1	15.1	12.8	10.5	7.5
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)