

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: FAIL-SAFE

Report Number: P560785

Luminaire Tested: FSR-12-4-LD4-1HI-35-UNV-82-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560785
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-4-LD4-1HI-35-UNV-82-84-EDD
Description: 1X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3789.0 lumens
Efficiency: N/A
Efficacy: 87.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

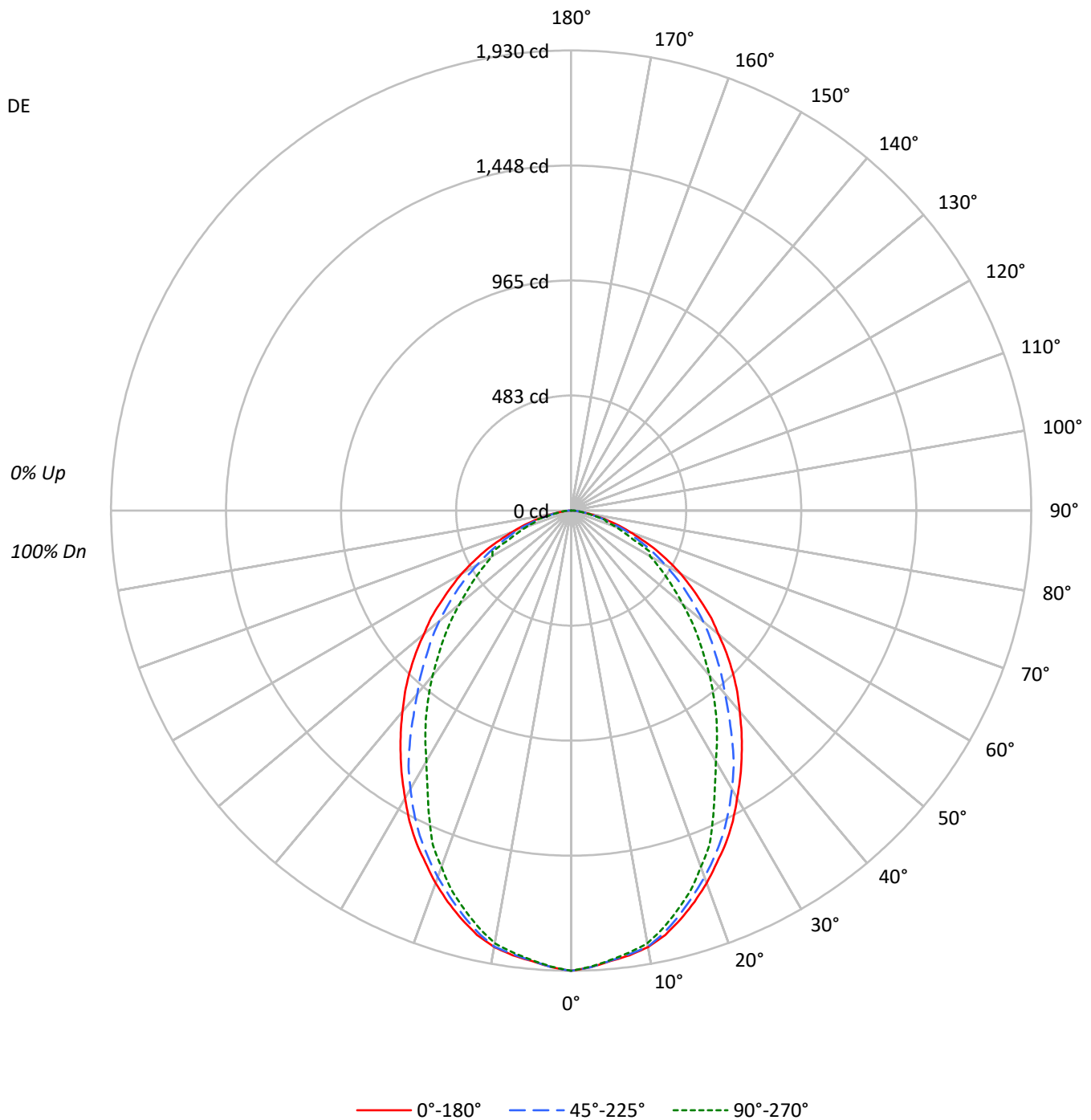
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5194	5194	5194
5°	5123	5117	5111
10°	5079	5073	5036
15°	4942	4892	4824
20°	4760	4684	4556
25°	4565	4465	4187
30°	4326	4188	3772
35°	4097	3870	3489
40°	3864	3527	3175
45°	3643	3261	2870
50°	3372	3026	2560
55°	3119	2743	2293
60°	2858	2450	2054
65°	2514	2145	1819
70°	2072	1878	1545
75°	1647	1438	1508
80°	1106	1037	969
85°	689	827	963

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3643 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	179.7	4.7
10°-20°	493.1	13.0
20°-30°	682.6	18.0
30°-40°	727.9	19.2
40°-50°	664.0	17.5
50°-60°	520.2	13.7
60°-70°	339.0	8.9
70°-80°	150.2	4.0
80°-90°	32.3	0.9
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°	1355.4	35.8
0°-40°	2083.2	55.0
0°-60°	3267.5	86.2
0°-90°	3789.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3789.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1930	1930	1930	1930	1930	
5°	1897	1894	1894	1892	1892	180
15°	1774	1774	1756	1738	1732	499
25°	1537	1528	1504	1450	1410	706
35°	1247	1238	1178	1089	1062	780
45°	957	937	857	785	754	737
55°	665	645	585	515	489	596
65°	395	373	337	344	286	389
75°	158	147	138	132	145	170
85°	22	24	27	29	31	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1930.1	1930.1	1930.1	1930.1	1930.1
2.5°	1916.7	1916.7	1916.7	1914.4	1914.4
5°	1896.6	1894.4	1894.4	1892.1	1892.1
7.5°	1881.0	1878.7	1876.5	1874.3	1869.8
10°	1858.7	1858.7	1856.4	1845.3	1843.0
12.5°	1823.0	1820.7	1811.8	1796.2	1791.7
15°	1773.9	1773.9	1756.0	1738.2	1731.5
17.5°	1720.3	1718.1	1695.8	1677.9	1669.0
20°	1662.3	1657.8	1635.5	1606.5	1590.9
22.5°	1597.6	1597.6	1570.8	1532.9	1517.3
25°	1537.4	1528.4	1503.9	1450.3	1410.2
27.5°	1468.2	1454.8	1428.0	1352.2	1305.3
30°	1392.3	1385.6	1347.7	1249.5	1213.8
32.5°	1320.9	1309.8	1269.6	1167.0	1138.0
35°	1247.3	1238.4	1178.1	1088.9	1062.1
37.5°	1173.7	1162.5	1086.6	1015.2	981.8
40°	1100.0	1086.6	1004.1	939.4	903.7
42.5°	1030.9	1013.0	932.7	863.5	823.3
45°	957.2	937.1	856.8	785.4	754.2
47.5°	883.6	865.7	792.1	718.5	682.8
50°	805.5	789.9	722.9	649.3	611.4
52.5°	740.8	716.2	651.5	577.9	546.7
55°	664.9	644.8	584.6	515.4	488.7
57.5°	595.8	575.7	519.9	455.2	432.9
60°	531.0	502.0	455.2	399.4	381.6
62.5°	459.6	437.3	397.2	350.3	372.6
65°	394.9	372.6	336.9	343.6	285.6
67.5°	323.5	312.4	281.1	249.9	241.0
70°	263.3	249.9	238.7	205.3	196.4
72.5°	209.7	196.4	180.7	162.9	156.2
75°	158.4	147.3	138.3	131.6	145.0
77.5°	109.3	104.9	98.2	91.5	89.3
80°	71.4	69.2	66.9	64.7	62.5
82.5°	42.4	42.4	42.4	42.4	42.4
85°	22.3	24.5	26.8	29.0	31.2
87.5°	13.4	13.4	15.6	17.9	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)