

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: P562068

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562068
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-24-4-LD4-1HI-40-UNV-82-86-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3661.0 lumens
Efficiency: N/A
Efficacy: 84.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

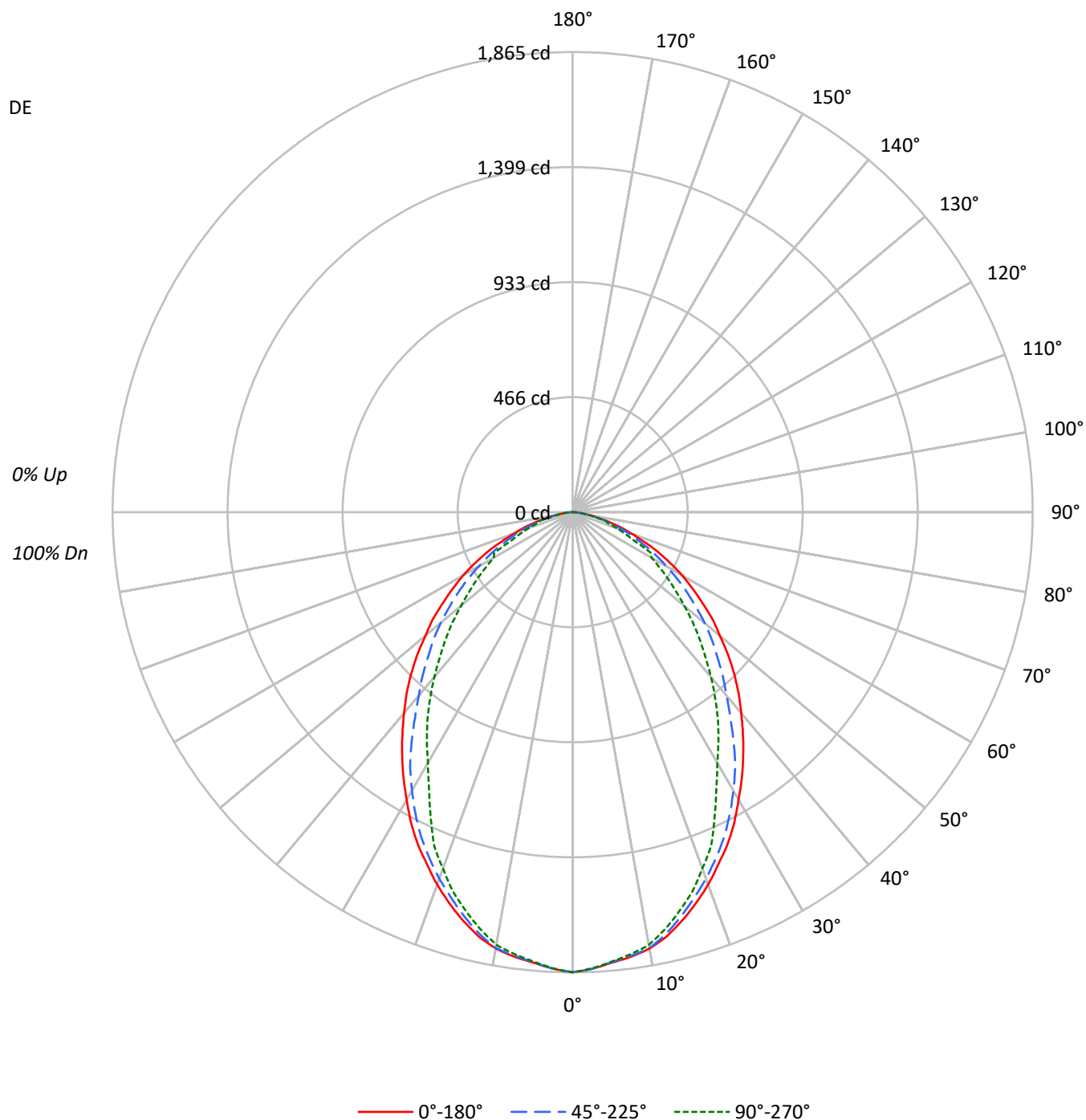
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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			
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°	2509	2509	2509
5°	2475	2472	2469
10°	2454	2451	2433
15°	2388	2363	2330
20°	2300	2263	2201
25°	2205	2157	2023
30°	2090	2023	1822
35°	1980	1870	1686
40°	1867	1704	1534
45°	1760	1575	1387
50°	1629	1462	1236
55°	1507	1325	1107
60°	1381	1183	992
65°	1215	1036	879
70°	1001	908	746
75°	796	695	728
80°	535	501	468
85°	333	400	466

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1760 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.6	4.7
10°-20°	476.4	13.0
20°-30°	659.6	18.0
30°-40°	703.3	19.2
40°-50°	641.6	17.5
50°-60°	502.6	13.7
60°-70°	327.6	8.9
70°-80°	145.1	4.0
80°-90°	31.2	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°	1309.6	35.8
0°-40°	2012.8	55.0
0°-60°	3157.1	86.2
0°-90°	3661.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3661.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1865	1865	1865	1865	1865	
5°	1832	1830	1830	1828	1828	174
15°	1714	1714	1697	1680	1673	482
25°	1485	1477	1453	1401	1362	682
35°	1205	1196	1138	1052	1026	753
45°	925	906	828	759	729	712
55°	642	623	565	498	472	576
65°	382	360	326	332	276	376
75°	153	142	134	127	140	164
85°	22	24	26	28	30	30
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1864.9	1864.9	1864.9	1864.9	1864.9
2.5°	1851.9	1851.9	1851.9	1849.8	1849.8
5°	1832.5	1830.4	1830.4	1828.2	1828.2
7.5°	1817.4	1815.3	1813.1	1811.0	1806.7
10°	1795.9	1795.9	1793.7	1782.9	1780.8
12.5°	1761.4	1759.2	1750.6	1735.5	1731.2
15°	1714.0	1714.0	1696.7	1679.5	1673.0
17.5°	1662.2	1660.1	1638.5	1621.2	1612.6
20°	1606.2	1601.8	1580.3	1552.3	1537.2
22.5°	1543.6	1543.6	1517.8	1481.1	1466.0
25°	1485.4	1476.8	1453.1	1401.3	1362.5
27.5°	1418.6	1405.7	1379.8	1306.5	1261.2
30°	1345.3	1338.8	1302.2	1207.3	1172.8
32.5°	1276.3	1265.5	1226.7	1127.5	1099.5
35°	1205.2	1196.5	1138.3	1052.1	1026.2
37.5°	1134.0	1123.2	1049.9	980.9	948.6
40°	1062.9	1049.9	970.2	907.6	873.1
42.5°	996.0	978.8	901.2	834.3	795.5
45°	924.9	905.5	827.9	758.9	728.7
47.5°	853.7	836.5	765.3	694.2	659.7
50°	778.3	763.2	698.5	627.4	590.7
52.5°	715.8	692.0	629.5	558.4	528.2
55°	642.5	623.1	564.8	498.0	472.1
57.5°	575.6	556.2	502.3	439.8	418.2
60°	513.1	485.1	439.8	385.9	368.7
62.5°	444.1	422.6	383.8	338.5	360.0
65°	381.6	360.0	325.5	332.0	276.0
67.5°	312.6	301.8	271.6	241.5	232.8
70°	254.4	241.5	230.7	198.3	189.7
72.5°	202.7	189.7	174.6	157.4	150.9
75°	153.1	142.3	133.7	127.2	140.1
77.5°	105.6	101.3	94.9	88.4	86.2
80°	69.0	66.8	64.7	62.5	60.4
82.5°	41.0	41.0	41.0	41.0	41.0
85°	21.6	23.7	25.9	28.0	30.2
87.5°	12.9	12.9	15.1	17.2	19.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)