

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: P563477

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-82-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563477
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-LD4-3STD-35-UNV-82-86-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10551.0 lumens
Efficiency: N/A
Efficacy: 105.6 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

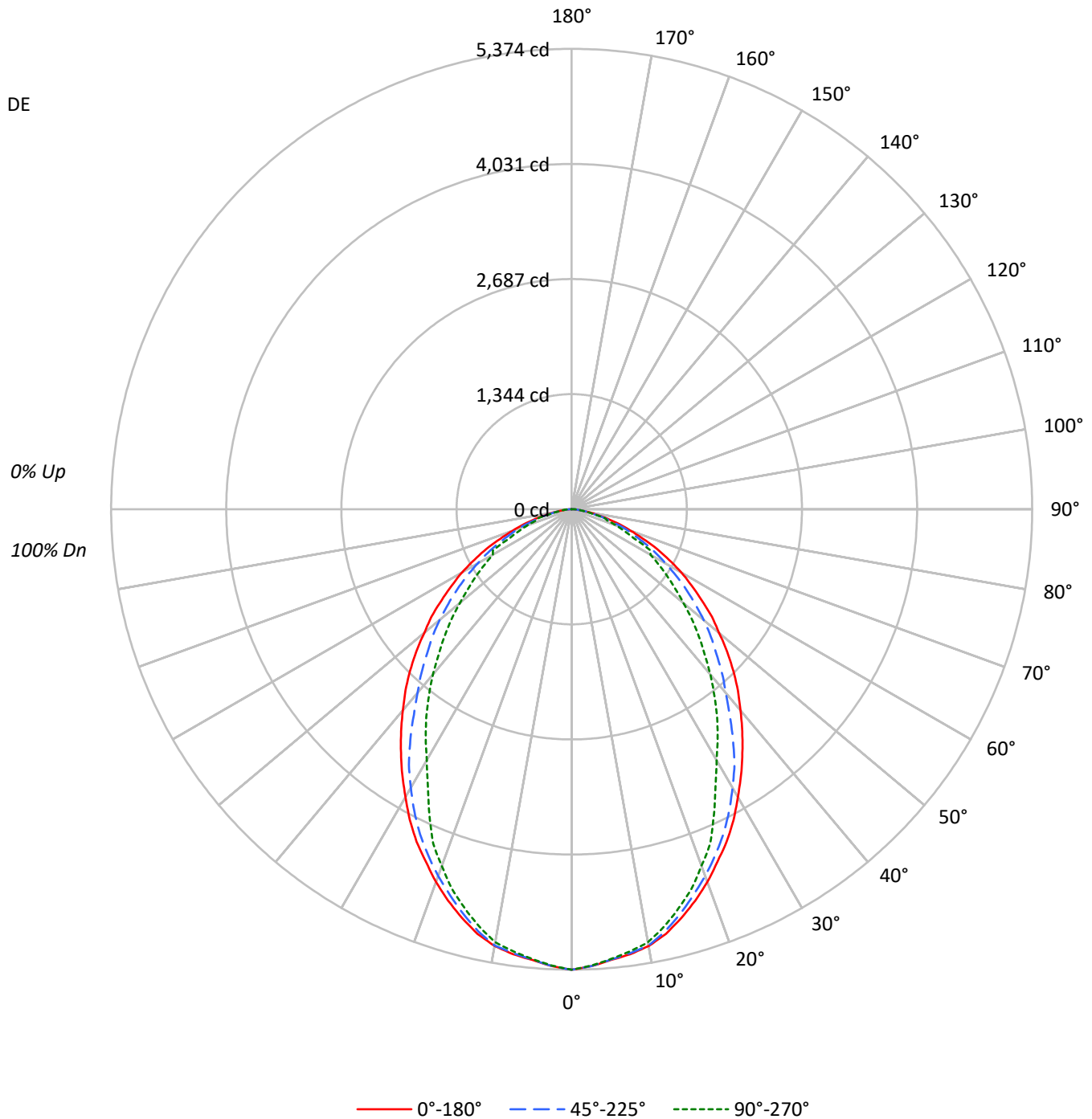
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7231	7231	7231
5°	7133	7125	7116
10°	7071	7063	7012
15°	6881	6811	6716
20°	6628	6521	6343
25°	6356	6217	5830
30°	6024	5831	5251
35°	5705	5389	4858
40°	5380	4911	4420
45°	5072	4540	3996
50°	4695	4214	3564
55°	4343	3819	3192
60°	3979	3411	2859
65°	3501	2987	2532
70°	2884	2615	2151
75°	2293	2002	2100
80°	1540	1444	1348
85°	959	1152	1343

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5072 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	500.3	4.7
10°-20°	1373.0	13.0
20°-30°	1900.9	18.0
30°-40°	2026.9	19.2
40°-50°	1849.1	17.5
50°-60°	1448.6	13.7
60°-70°	944.1	8.9
70°-80°	418.3	4.0
80°-90°	89.8	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°	3774.2	35.8
0°-40°	5801.0	55.0
0°-60°	9098.8	86.2
0°-90°	10551.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10551.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5374	5374	5374	5374	5374	
5°	5281	5275	5275	5269	5269	501
15°	4940	4940	4890	4840	4822	1389
25°	4281	4256	4188	4039	3927	1965
35°	3473	3448	3281	3032	2958	2171
45°	2666	2610	2386	2187	2100	2053
55°	1852	1796	1628	1435	1361	1661
65°	1100	1038	938	957	795	1084
75°	441	410	385	367	404	473
85°	62	68	75	81	87	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5374.5	5374.5	5374.5	5374.5	5374.5
2.5°	5337.3	5337.3	5337.3	5331.0	5331.0
5°	5281.3	5275.1	5275.1	5268.9	5268.9
7.5°	5237.8	5231.6	5225.4	5219.2	5206.8
10°	5175.7	5175.7	5169.5	5138.4	5132.2
12.5°	5076.3	5070.1	5045.2	5001.7	4989.3
15°	4939.6	4939.6	4889.9	4840.2	4821.6
17.5°	4790.5	4784.3	4722.1	4672.4	4647.6
20°	4628.9	4616.5	4554.4	4473.6	4430.1
22.5°	4448.8	4448.8	4374.2	4268.6	4225.1
25°	4281.0	4256.1	4187.8	4038.7	3926.8
27.5°	4088.4	4051.1	3976.5	3765.3	3634.8
30°	3877.1	3858.5	3752.9	3479.5	3380.1
32.5°	3678.3	3647.2	3535.4	3249.6	3168.8
35°	3473.3	3448.4	3280.6	3032.1	2957.5
37.5°	3268.2	3237.1	3025.9	2827.1	2733.9
40°	3063.2	3025.9	2796.0	2615.8	2516.4
42.5°	2870.6	2820.9	2597.2	2404.6	2292.7
45°	2665.5	2609.6	2385.9	2187.1	2100.1
47.5°	2460.5	2410.8	2205.7	2000.7	1901.3
50°	2243.0	2199.5	2013.1	1808.1	1702.5
52.5°	2062.8	1994.5	1814.3	1609.3	1522.3
55°	1851.6	1795.7	1627.9	1435.3	1360.7
57.5°	1659.0	1603.0	1447.7	1267.5	1205.4
60°	1478.8	1398.0	1267.5	1112.2	1062.5
62.5°	1279.9	1217.8	1106.0	975.5	1037.6
65°	1099.8	1037.6	938.2	956.9	795.3
67.5°	900.9	869.9	782.9	695.9	671.0
70°	733.2	695.9	664.8	571.6	546.8
72.5°	584.1	546.8	503.3	453.6	434.9
75°	441.1	410.1	385.2	366.6	403.9
77.5°	304.5	292.0	273.4	254.7	248.5
80°	198.8	192.6	186.4	180.2	174.0
82.5°	118.1	118.1	118.1	118.1	118.1
85°	62.1	68.3	74.6	80.8	87.0
87.5°	37.3	37.3	43.5	49.7	55.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)