

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: P562511

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-81-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562511
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-LD4-2HI-35-UNV-81-97-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8691.0 lumens
Efficiency: N/A
Efficacy: 100.6 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

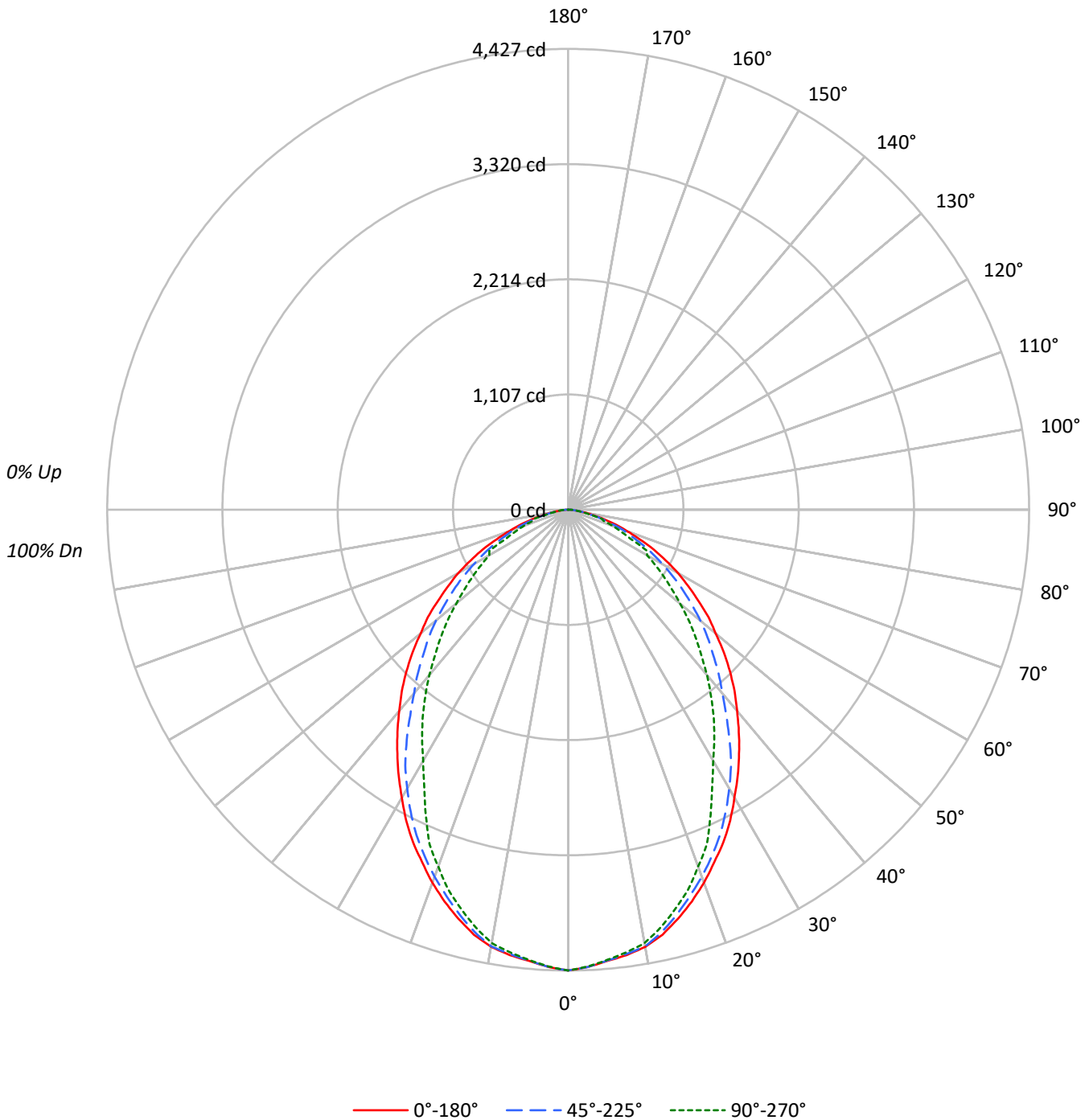
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				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°	5957	5957	5957
5°	5876	5869	5862
10°	5825	5818	5776
15°	5668	5611	5532
20°	5459	5372	5225
25°	5235	5121	4802
30°	4962	4803	4326
35°	4699	4439	4002
40°	4432	4045	3641
45°	4178	3740	3292
50°	3867	3471	2935
55°	3578	3145	2629
60°	3278	2810	2355
65°	2884	2460	2086
70°	2376	2154	1772
75°	1889	1650	1730
80°	1269	1189	1110
85°	790	948	1107

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4178 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	412.1	4.7
10°-20°	1131.0	13.0
20°-30°	1565.8	18.0
30°-40°	1669.6	19.2
40°-50°	1523.1	17.5
50°-60°	1193.3	13.7
60°-70°	777.7	8.9
70°-80°	344.6	4.0
80°-90°	74.0	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°	3108.8	35.8
0°-40°	4778.4	55.0
0°-60°	7494.8	86.2
0°-90°	8691.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8691.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4427	4427	4427	4427	4427	
5°	4350	4345	4345	4340	4340	413
15°	4069	4069	4028	3987	3972	1144
25°	3526	3506	3450	3327	3235	1619
35°	2861	2840	2702	2498	2436	1789
45°	2196	2150	1965	1802	1730	1691
55°	1525	1479	1341	1182	1121	1368
65°	906	855	773	788	655	893
75°	363	338	317	302	333	389
85°	51	56	61	66	72	71
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4427.1	4427.1	4427.1	4427.1	4427.1
2.5°	4396.4	4396.4	4396.4	4391.3	4391.3
5°	4350.3	4345.2	4345.2	4340.1	4340.1
7.5°	4314.5	4309.4	4304.2	4299.1	4288.9
10°	4263.3	4263.3	4258.2	4232.6	4227.5
12.5°	4181.4	4176.3	4155.8	4120.0	4109.8
15°	4068.8	4068.8	4027.9	3986.9	3971.6
17.5°	3946.0	3940.9	3889.7	3848.7	3828.3
20°	3812.9	3802.7	3751.5	3685.0	3649.1
22.5°	3664.5	3664.5	3603.1	3516.1	3480.2
25°	3526.3	3505.8	3449.5	3326.7	3234.6
27.5°	3367.7	3336.9	3275.5	3101.5	2994.0
30°	3193.6	3178.3	3091.3	2866.1	2784.2
32.5°	3029.9	3004.3	2912.1	2676.7	2610.2
35°	2861.0	2840.5	2702.3	2497.6	2436.2
37.5°	2692.1	2666.5	2492.5	2328.7	2251.9
40°	2523.2	2492.5	2303.1	2154.7	2072.8
42.5°	2364.5	2323.6	2139.3	1980.7	1888.5
45°	2195.6	2149.6	1965.3	1801.5	1729.9
47.5°	2026.7	1985.8	1816.9	1648.0	1566.1
50°	1847.6	1811.8	1658.2	1489.3	1402.3
52.5°	1699.2	1642.9	1494.5	1325.6	1253.9
55°	1525.2	1479.1	1340.9	1182.3	1120.8
57.5°	1366.5	1320.4	1192.5	1044.1	992.9
60°	1218.1	1151.6	1044.1	916.1	875.2
62.5°	1054.3	1003.1	911.0	803.5	854.7
65°	905.9	854.7	772.8	788.2	655.1
67.5°	742.1	716.5	644.9	573.2	552.7
70°	603.9	573.2	547.6	470.9	450.4
72.5°	481.1	450.4	414.6	373.6	358.3
75°	363.4	337.8	317.3	302.0	332.7
77.5°	250.8	240.5	225.2	209.8	204.7
80°	163.8	158.7	153.5	148.4	143.3
82.5°	97.2	97.2	97.2	97.2	97.2
85°	51.2	56.3	61.4	66.5	71.7
87.5°	30.7	30.7	35.8	40.9	46.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)