

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: P589872

Luminaire Tested: FSR-24-2-LD4-1HI-35-UNV-93-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589872
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1HI-35-UNV-93-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2249.0 lumens
Efficiency: N/A
Efficacy: 104.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

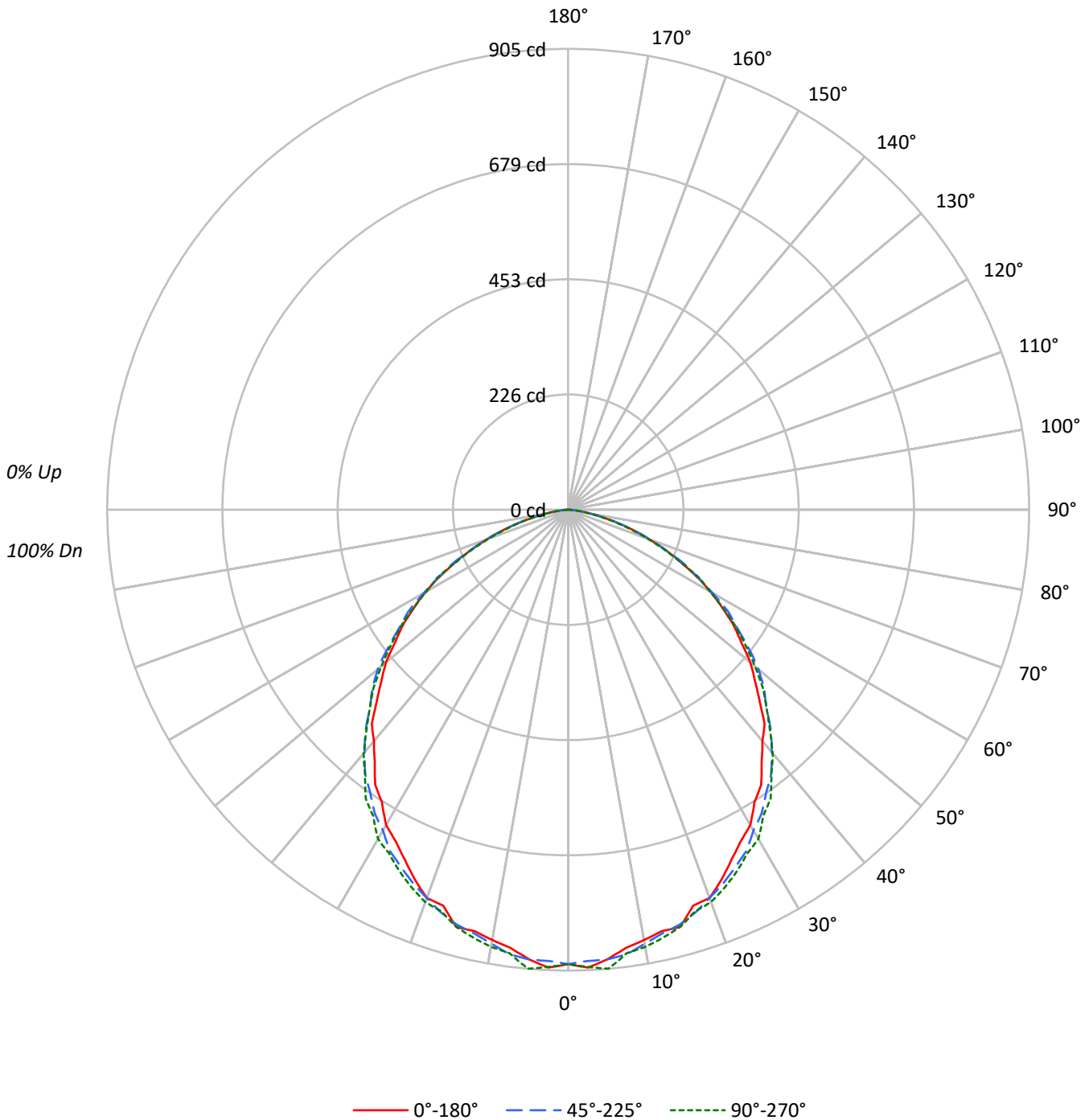
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86																												
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73																												
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62																												
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53																												
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46																												
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41																												
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36																												
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32																												
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29																												
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2401	2401	2401
5°	2393	2394	2445
10°	2345	2365	2382
15°	2363	2350	2364
20°	2323	2323	2348
25°	2252	2301	2327
30°	2221	2260	2320
35°	2169	2226	2276
40°	2085	2185	2194
45°	2021	2093	2096
50°	1955	2043	2004
55°	1863	1899	1886
60°	1742	1759	1728
65°	1553	1592	1542
70°	1333	1337	1300
75°	1055	1053	1013
80°	707	688	660
85°	383	380	355

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2147 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.9	3.7
10°-20°	237.9	10.6
20°-30°	356.4	15.8
30°-40°	422.4	18.8
40°-50°	423.2	18.8
50°-60°	359.2	16.0
60°-70°	242.2	10.8
70°-80°	106.4	4.7
80°-90°	17.3	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°	678.2	30.2
0°-40°	1100.7	48.9
0°-60°	1883.1	83.7
0°-90°	2249.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2249.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	892	892	892	892	892	
5°	886	884	886	884	905	84
15°	848	838	844	848	848	236
25°	758	763	775	785	784	351
35°	660	662	678	693	693	410
45°	531	541	550	564	551	411
55°	397	394	405	402	402	353
65°	244	241	250	241	242	243
75°	102	99	101	94	97	109
85°	12	12	12	12	12	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	892.3	892.3	892.3	892.3	892.3
2.5°	900.1	893.3	886.9	894.3	898.8
5°	886.0	883.9	886.4	883.7	905.0
7.5°	867.8	875.8	880.4	877.5	878.8
10°	858.1	855.4	865.6	872.8	871.7
12.5°	847.8	851.9	852.5	860.2	860.9
15°	848.3	838.5	843.7	848.1	848.4
17.5°	815.4	826.0	829.6	839.6	827.1
20°	811.3	803.6	811.3	821.6	820.0
22.5°	786.6	777.9	794.5	803.6	803.1
25°	758.5	762.6	775.1	785.2	783.6
27.5°	733.8	738.6	756.4	770.3	761.3
30°	714.8	712.4	727.4	739.8	746.7
32.5°	680.8	689.6	707.1	719.4	712.8
35°	660.2	662.1	677.5	693.1	692.7
37.5°	624.1	633.2	654.8	659.1	655.1
40°	593.4	602.5	621.9	626.7	624.7
42.5°	570.7	572.3	589.0	594.4	585.8
45°	531.1	541.1	550.0	564.2	550.8
47.5°	497.5	502.1	521.5	525.3	518.2
50°	467.0	468.6	488.1	483.3	478.7
52.5°	428.6	435.4	446.3	445.4	440.0
55°	397.0	394.4	404.8	402.0	401.9
57.5°	359.1	363.7	372.3	367.9	360.9
60°	323.6	323.8	326.9	321.9	321.0
62.5°	284.1	285.5	286.2	280.1	290.0
65°	243.9	240.7	250.1	240.6	242.2
67.5°	206.9	208.5	207.6	201.6	203.9
70°	169.4	171.4	169.9	163.1	165.2
72.5°	135.0	132.5	134.1	125.6	129.5
75°	101.5	99.4	101.3	94.1	97.4
77.5°	69.1	70.7	69.6	65.8	68.0
80°	45.6	44.4	44.4	42.2	42.6
82.5°	26.6	25.3	25.0	24.3	25.3
85°	12.4	12.1	12.3	12.0	11.5
87.5°	4.5	4.6	4.6	4.4	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)