

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: P589953

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-81-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589953
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-LD4-1LO-35-UNV-81-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1169.0 lumens
Efficiency: N/A
Efficacy: 99.9 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

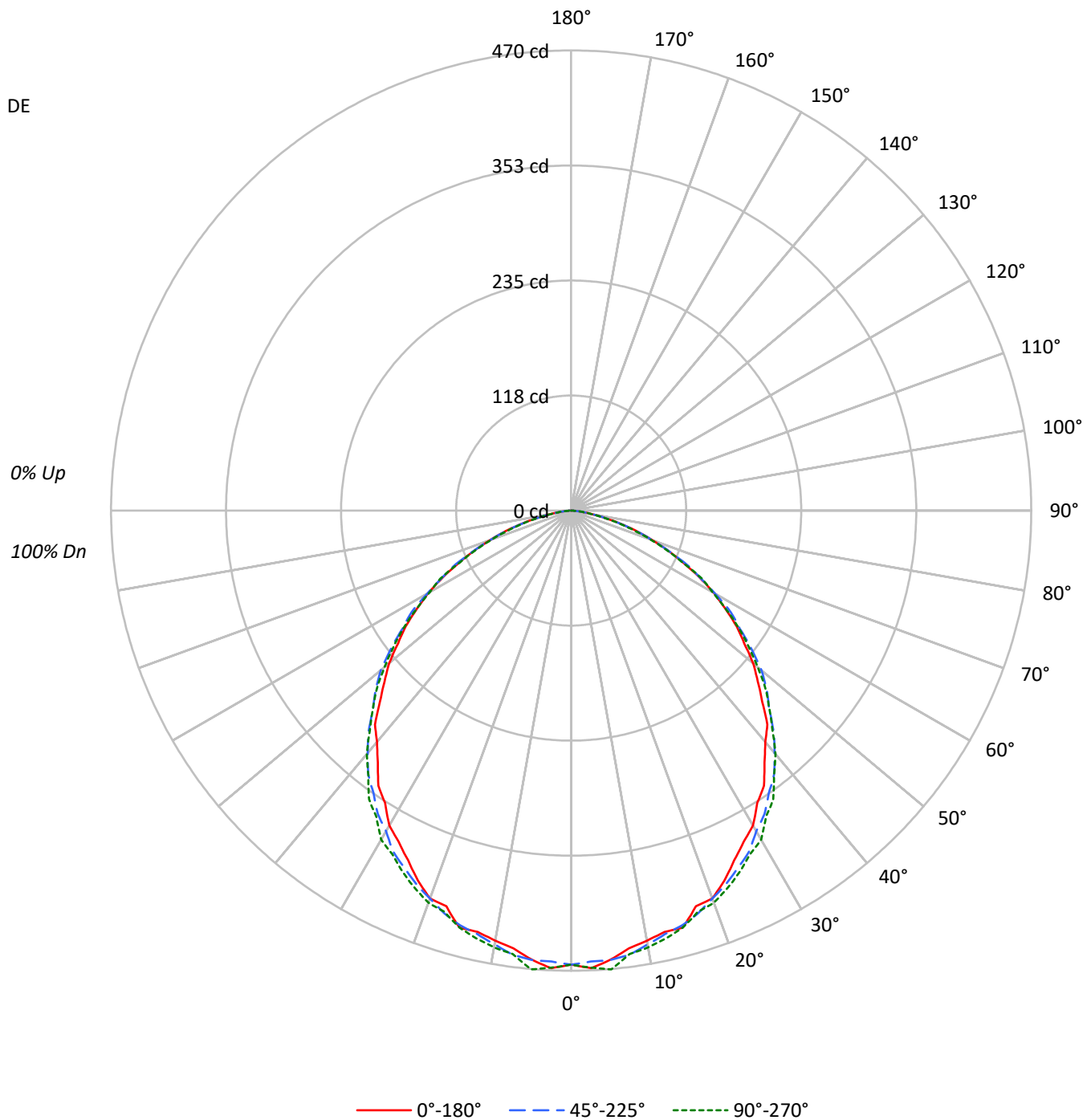
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1248	1248	1248
5°	1244	1244	1271
10°	1219	1229	1238
15°	1229	1222	1229
20°	1208	1208	1221
25°	1170	1196	1209
30°	1154	1175	1206
35°	1127	1157	1183
40°	1083	1136	1141
45°	1051	1088	1090
50°	1016	1062	1042
55°	968	987	980
60°	905	914	898
65°	807	828	802
70°	692	695	676
75°	549	547	526
80°	367	358	344
85°	201	198	185

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 1116 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.6	3.7
10°-20°	123.7	10.6
20°-30°	185.3	15.8
30°-40°	219.6	18.8
40°-50°	220.0	18.8
50°-60°	186.7	16.0
60°-70°	125.9	10.8
70°-80°	55.3	4.7
80°-90°	9.0	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°	352.5	30.2
0°-40°	572.1	48.9
0°-60°	978.8	83.7
0°-90°	1169.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1169.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	464	464	464	464	464	
5°	460	460	461	459	470	43
15°	441	436	439	441	441	123
25°	394	396	403	408	407	182
35°	343	344	352	360	360	213
45°	276	281	286	293	286	214
55°	206	205	210	209	209	184
65°	127	125	130	125	126	126
75°	53	52	53	49	51	57
85°	6	6	6	6	6	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	463.8	463.8	463.8	463.8	463.8
2.5°	467.8	464.3	461.0	464.8	467.2
5°	460.5	459.5	460.7	459.3	470.4
7.5°	451.1	455.2	457.6	456.1	456.8
10°	446.0	444.6	449.9	453.6	453.1
12.5°	440.7	442.8	443.1	447.1	447.5
15°	441.0	435.9	438.6	440.8	441.0
17.5°	423.8	429.3	431.2	436.4	429.9
20°	421.7	417.7	421.7	427.1	426.2
22.5°	408.9	404.4	413.0	417.7	417.4
25°	394.2	396.4	402.9	408.1	407.3
27.5°	381.4	383.9	393.2	400.4	395.7
30°	371.5	370.3	378.1	384.5	388.1
32.5°	353.9	358.4	367.5	373.9	370.5
35°	343.2	344.2	352.1	360.3	360.0
37.5°	324.4	329.1	340.3	342.6	340.5
40°	308.4	313.2	323.3	325.7	324.7
42.5°	296.6	297.5	306.1	309.0	304.5
45°	276.1	281.2	285.9	293.3	286.3
47.5°	258.6	261.0	271.1	273.0	269.4
50°	242.7	243.6	253.7	251.2	248.8
52.5°	222.8	226.3	232.0	231.5	228.7
55°	206.4	205.0	210.4	208.9	208.9
57.5°	186.7	189.1	193.5	191.2	187.6
60°	168.2	168.3	169.9	167.3	166.8
62.5°	147.7	148.4	148.8	145.6	150.7
65°	126.8	125.1	130.0	125.0	125.9
67.5°	107.6	108.4	107.9	104.8	106.0
70°	88.0	89.1	88.3	84.8	85.9
72.5°	70.2	68.9	69.7	65.3	67.3
75°	52.8	51.7	52.6	48.9	50.6
77.5°	35.9	36.8	36.2	34.2	35.3
80°	23.7	23.1	23.1	21.9	22.2
82.5°	13.8	13.2	13.0	12.6	13.2
85°	6.5	6.3	6.4	6.2	6.0
87.5°	2.3	2.4	2.4	2.3	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)