

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: P589959

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-82-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589959
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-82-86-EDD
Description: 2X2 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: 1313.0 lumens
Efficiency: N/A
Efficacy: 112.2 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

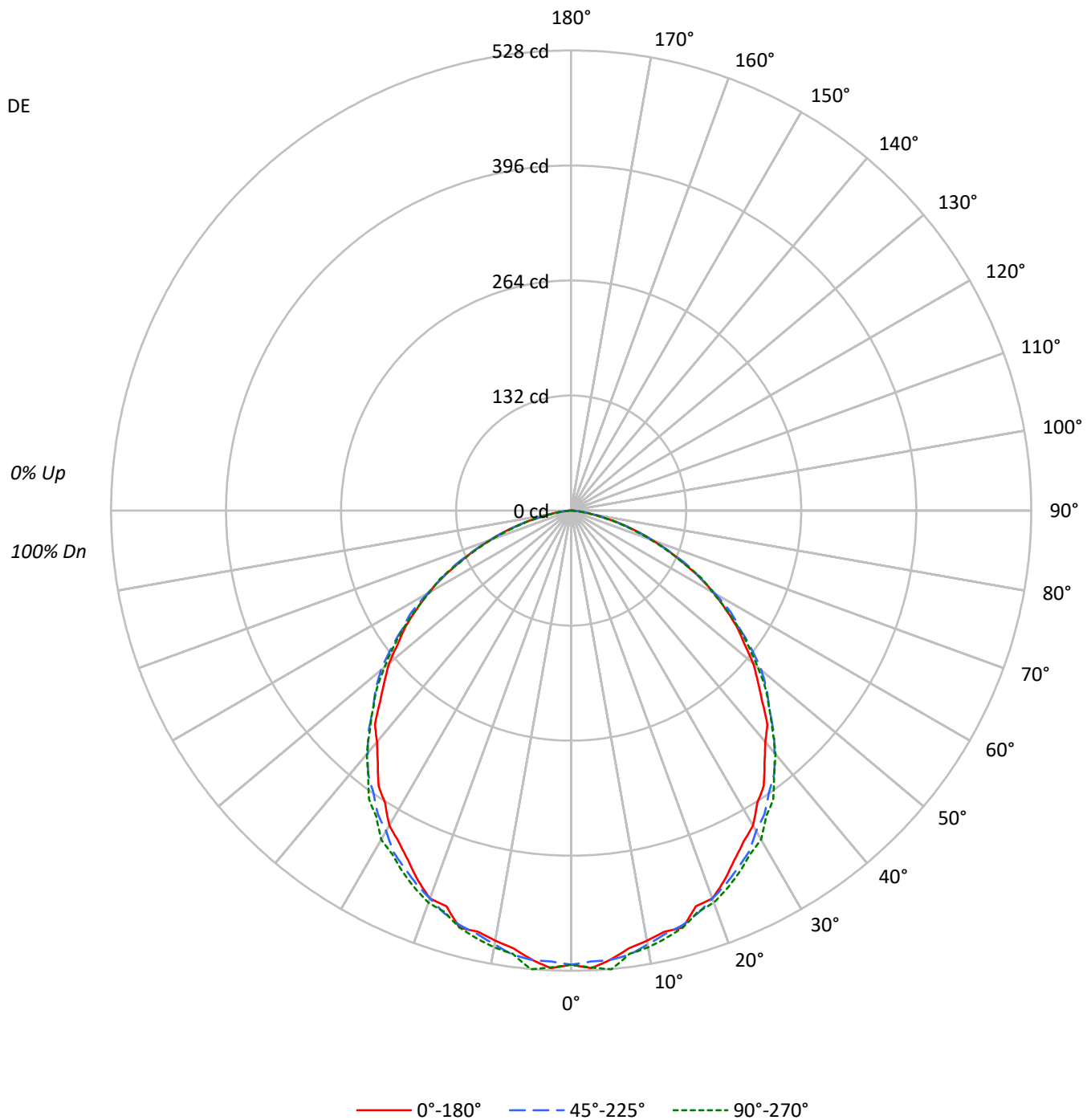
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1402	1402	1402
5°	1397	1398	1427
10°	1369	1381	1391
15°	1380	1372	1380
20°	1357	1357	1371
25°	1315	1344	1358
30°	1297	1319	1354
35°	1266	1299	1328
40°	1217	1276	1281
45°	1180	1222	1224
50°	1141	1193	1170
55°	1088	1109	1101
60°	1017	1027	1009
65°	907	930	900
70°	778	780	759
75°	617	614	591
80°	412	401	386
85°	225	222	207

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1254 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.0	3.7
10°-20°	138.9	10.6
20°-30°	208.1	15.8
30°-40°	246.6	18.8
40°-50°	247.1	18.8
50°-60°	209.7	16.0
60°-70°	141.4	10.8
70°-80°	62.1	4.7
80°-90°	10.1	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°	396.0	30.2
0°-40°	642.6	48.9
0°-60°	1099.4	83.7
0°-90°	1313.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1313.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	521	521	521	521	521	
5°	517	516	518	516	528	49
15°	495	490	493	495	495	138
25°	443	445	452	458	458	205
35°	385	387	396	405	404	239
45°	310	316	321	329	322	240
55°	232	230	236	235	235	206
65°	142	140	146	140	141	142
75°	59	58	59	55	57	64
85°	7	7	7	7	7	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	521.0	521.0	521.0	521.0	521.0
2.5°	525.5	521.5	517.8	522.1	524.7
5°	517.3	516.1	517.5	515.9	528.4
7.5°	506.6	511.3	514.0	512.3	513.0
10°	501.0	499.4	505.4	509.5	508.9
12.5°	494.9	497.4	497.7	502.2	502.6
15°	495.3	489.6	492.6	495.1	495.3
17.5°	476.0	482.2	484.3	490.2	482.9
20°	473.7	469.2	473.7	479.7	478.7
22.5°	459.2	454.2	463.9	469.2	468.8
25°	442.8	445.2	452.5	458.4	457.5
27.5°	428.4	431.2	441.6	449.7	444.5
30°	417.3	415.9	424.6	431.9	435.9
32.5°	397.5	402.6	412.8	420.0	416.2
35°	385.4	386.6	395.5	404.7	404.4
37.5°	364.4	369.7	382.3	384.8	382.5
40°	346.4	351.7	363.1	365.9	364.7
42.5°	333.2	334.1	343.9	347.0	342.0
45°	310.1	315.9	321.1	329.4	321.6
47.5°	290.4	293.1	304.4	306.7	302.6
50°	272.6	273.6	284.9	282.2	279.5
52.5°	250.2	254.2	260.6	260.0	256.9
55°	231.8	230.2	236.3	234.7	234.6
57.5°	209.7	212.4	217.3	214.8	210.7
60°	188.9	189.0	190.8	187.9	187.4
62.5°	165.9	166.7	167.1	163.5	169.3
65°	142.4	140.5	146.0	140.4	141.4
67.5°	120.8	121.7	121.2	117.7	119.1
70°	98.9	100.1	99.2	95.2	96.5
72.5°	78.8	77.4	78.3	73.3	75.6
75°	59.3	58.0	59.1	55.0	56.8
77.5°	40.4	41.3	40.6	38.4	39.7
80°	26.6	25.9	25.9	24.6	24.9
82.5°	15.5	14.8	14.6	14.2	14.8
85°	7.3	7.1	7.2	7.0	6.7
87.5°	2.6	2.7	2.7	2.6	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)