

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: P590016

Luminaire Tested: FSR-24-2-LD4-1LO-50-UNV-81-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590016
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-50-UNV-81-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1333.0 lumens
Efficiency: N/A
Efficacy: 113.9 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

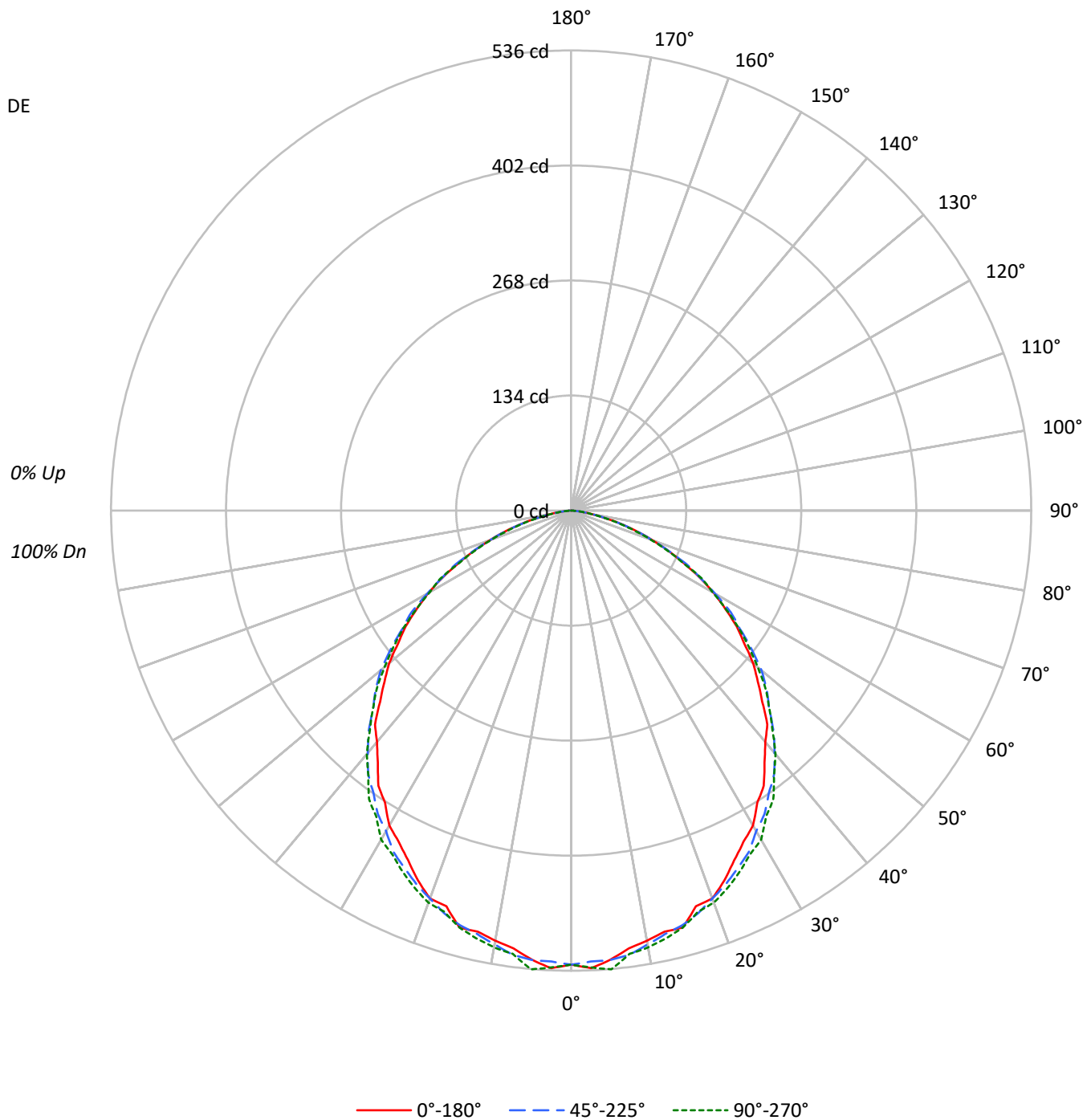
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	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°	1423	1423	1423
5°	1418	1419	1449
10°	1390	1402	1412
15°	1401	1393	1401
20°	1377	1377	1392
25°	1335	1364	1379
30°	1317	1340	1375
35°	1285	1319	1349
40°	1235	1295	1301
45°	1198	1241	1243
50°	1159	1211	1188
55°	1104	1126	1118
60°	1032	1042	1024
65°	921	944	914
70°	790	792	770
75°	626	624	600
80°	418	408	392
85°	228	225	210

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1273 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.8	3.7
10°-20°	141.0	10.6
20°-30°	211.2	15.8
30°-40°	250.4	18.8
40°-50°	250.8	18.8
50°-60°	212.9	16.0
60°-70°	143.6	10.8
70°-80°	63.1	4.7
80°-90°	10.2	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°	402.0	30.2
0°-40°	652.4	48.9
0°-60°	1116.1	83.7
0°-90°	1333.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1333.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	529	529	529	529	529	
5°	525	524	525	524	536	50
15°	503	497	500	503	503	140
25°	450	452	459	465	464	208
35°	391	392	402	411	411	243
45°	315	321	326	334	326	244
55°	235	234	240	238	238	209
65°	145	143	148	143	144	144
75°	60	59	60	56	58	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°	528.9	528.9	528.9	528.9	528.9
2.5°	533.5	529.4	525.7	530.1	532.7
5°	525.1	523.9	525.3	523.8	536.4
7.5°	514.4	519.1	521.8	520.1	520.8
10°	508.6	507.0	513.1	517.3	516.7
12.5°	502.5	504.9	505.3	509.8	510.3
15°	502.8	497.0	500.1	502.7	502.9
17.5°	483.3	489.6	491.7	497.6	490.2
20°	480.9	476.3	480.9	487.0	486.0
22.5°	466.2	461.1	470.9	476.3	476.0
25°	449.5	452.0	459.4	465.4	464.4
27.5°	434.9	437.8	448.3	456.6	451.3
30°	423.7	422.2	431.1	438.5	442.6
32.5°	403.5	408.7	419.1	426.4	422.5
35°	391.3	392.5	401.5	410.8	410.6
37.5°	369.9	375.3	388.1	390.7	388.3
40°	351.7	357.1	368.6	371.4	370.3
42.5°	338.2	339.2	349.1	352.3	347.2
45°	314.8	320.7	326.0	334.4	326.5
47.5°	294.9	297.6	309.1	311.3	307.2
50°	276.8	277.7	289.3	286.5	283.7
52.5°	254.0	258.1	264.6	264.0	260.8
55°	235.3	233.8	239.9	238.3	238.2
57.5°	212.9	215.6	220.6	218.0	213.9
60°	191.8	191.9	193.7	190.8	190.3
62.5°	168.4	169.2	169.6	166.0	171.9
65°	144.6	142.7	148.3	142.6	143.5
67.5°	122.6	123.6	123.1	119.5	120.9
70°	100.4	101.6	100.7	96.7	97.9
72.5°	80.0	78.5	79.5	74.4	76.8
75°	60.2	58.9	60.0	55.8	57.7
77.5°	41.0	41.9	41.2	39.0	40.3
80°	27.0	26.3	26.3	25.0	25.3
82.5°	15.8	15.0	14.8	14.4	15.0
85°	7.4	7.2	7.3	7.1	6.8
87.5°	2.7	2.7	2.7	2.6	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)