

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: P589983

Luminaire Tested: FSR-24-2-LD4-1LO-40-UNV-81-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589983
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-40-UNV-81-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1355.0 lumens
Efficiency: N/A
Efficacy: 115.8 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

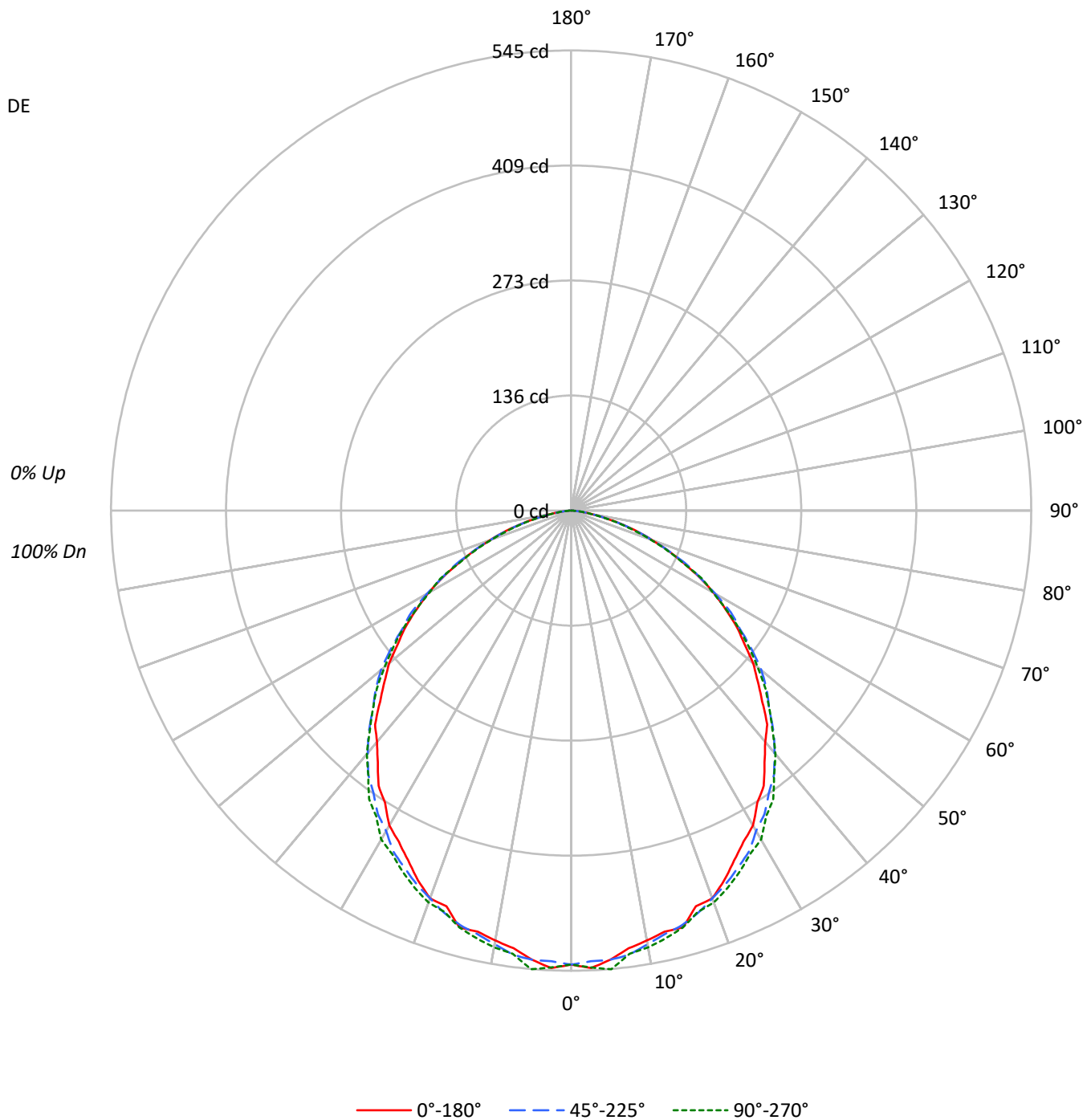
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1447	1447	1447
5°	1442	1442	1473
10°	1413	1425	1435
15°	1424	1416	1424
20°	1400	1400	1415
25°	1357	1387	1402
30°	1338	1362	1398
35°	1307	1341	1371
40°	1256	1316	1322
45°	1218	1261	1263
50°	1178	1231	1207
55°	1122	1144	1136
60°	1049	1060	1041
65°	936	960	929
70°	803	806	783
75°	636	634	610
80°	426	414	398
85°	232	228	213

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1294 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.6	3.7
10°-20°	143.3	10.6
20°-30°	214.7	15.8
30°-40°	254.5	18.8
40°-50°	255.0	18.8
50°-60°	216.4	16.0
60°-70°	145.9	10.8
70°-80°	64.1	4.7
80°-90°	10.4	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°	408.6	30.2
0°-40°	663.1	48.9
0°-60°	1134.5	83.7
0°-90°	1355.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1355.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	538	538	538	538	538	
5°	534	533	534	532	545	50
15°	511	505	508	511	511	142
25°	457	460	467	473	472	211
35°	398	399	408	418	417	247
45°	320	326	331	340	332	248
55°	239	238	244	242	242	213
65°	147	145	151	145	146	146
75°	61	60	61	57	59	66
85°	8	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°	537.6	537.6	537.6	537.6	537.6
2.5°	542.3	538.2	534.4	538.8	541.5
5°	533.8	532.6	534.0	532.4	545.3
7.5°	522.8	527.6	530.4	528.7	529.4
10°	517.0	515.3	521.5	525.8	525.2
12.5°	510.8	513.3	513.6	518.3	518.7
15°	511.1	505.2	508.3	511.0	511.2
17.5°	491.3	497.6	499.8	505.8	498.3
20°	488.8	484.2	488.8	495.0	494.0
22.5°	473.9	468.7	478.7	484.2	483.8
25°	457.0	459.5	467.0	473.1	472.1
27.5°	442.1	445.0	455.7	464.1	458.7
30°	430.7	429.2	438.2	445.7	449.9
32.5°	410.2	415.5	426.0	433.4	429.5
35°	397.8	398.9	408.2	417.6	417.3
37.5°	376.0	381.5	394.5	397.1	394.7
40°	357.5	363.0	374.7	377.6	376.4
42.5°	343.8	344.8	354.9	358.1	352.9
45°	320.0	326.0	331.4	339.9	331.9
47.5°	299.7	302.5	314.2	316.5	312.2
50°	281.3	282.3	294.0	291.2	288.4
52.5°	258.2	262.3	268.9	268.4	265.1
55°	239.2	237.6	243.9	242.2	242.1
57.5°	216.4	219.1	224.3	221.6	217.4
60°	195.0	195.1	196.9	193.9	193.4
62.5°	171.2	172.0	172.4	168.8	174.7
65°	147.0	145.0	150.7	144.9	145.9
67.5°	124.7	125.6	125.1	121.5	122.9
70°	102.0	103.3	102.4	98.3	99.5
72.5°	81.4	79.8	80.8	75.7	78.0
75°	61.2	59.9	61.0	56.7	58.7
77.5°	41.6	42.6	41.9	39.6	41.0
80°	27.5	26.7	26.7	25.4	25.7
82.5°	16.0	15.3	15.1	14.6	15.3
85°	7.5	7.3	7.4	7.2	6.9
87.5°	2.7	2.8	2.8	2.6	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)