

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: P590022

Luminaire Tested: FSR-24-2-LD4-1LO-50-UNV-82-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590022
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-82-85-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1364.0 lumens
Efficiency: N/A
Efficacy: 116.6 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

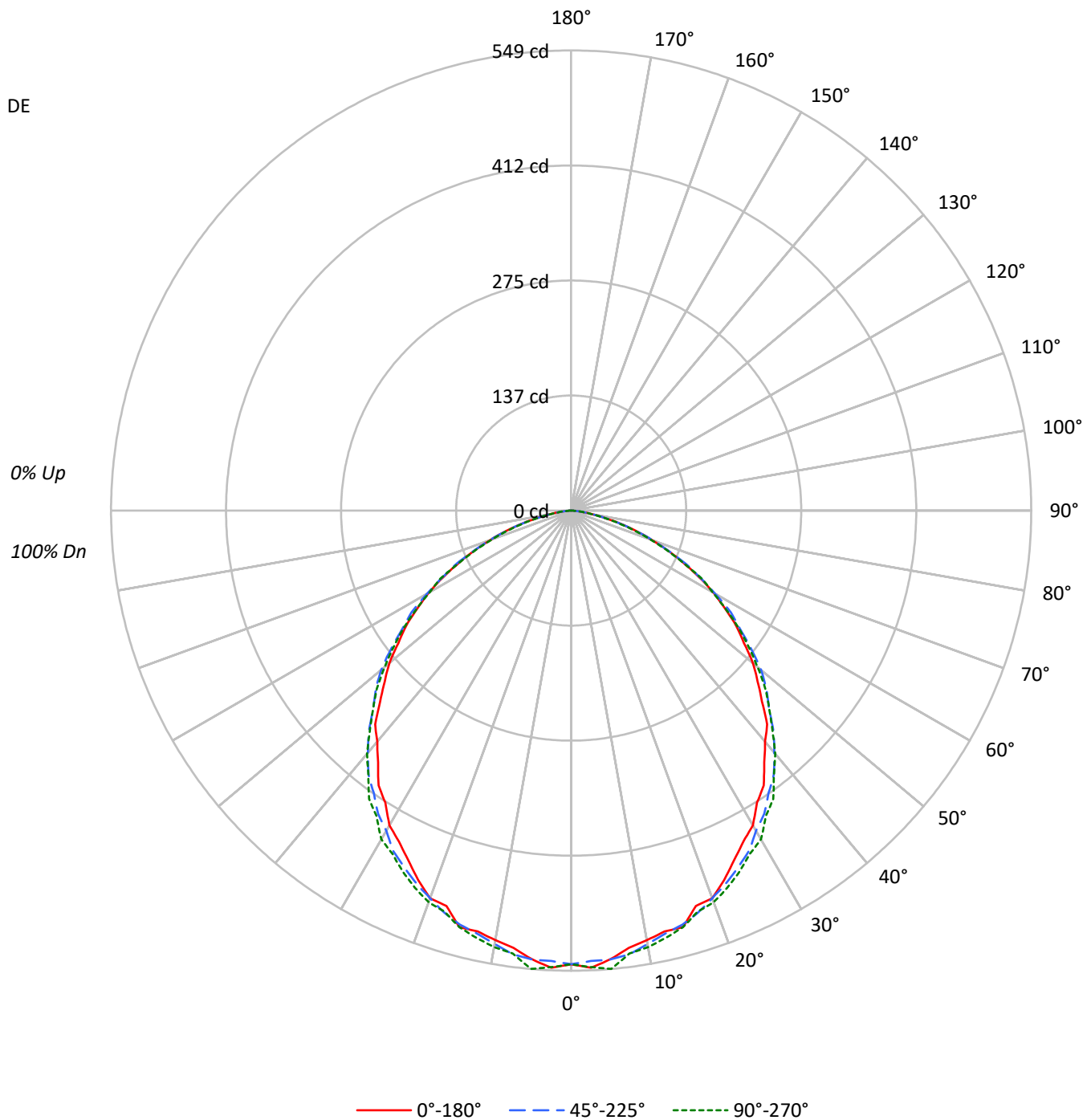
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1456	1456	1456
5°	1452	1452	1483
10°	1422	1435	1445
15°	1433	1426	1434
20°	1409	1409	1424
25°	1366	1396	1411
30°	1347	1371	1407
35°	1315	1350	1380
40°	1264	1325	1331
45°	1226	1270	1271
50°	1186	1239	1215
55°	1130	1152	1143
60°	1056	1067	1048
65°	942	966	935
70°	808	811	788
75°	640	638	613
80°	429	417	401
85°	232	232	216

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1302 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.9	3.7
10°-20°	144.3	10.6
20°-30°	216.2	15.8
30°-40°	256.2	18.8
40°-50°	256.7	18.8
50°-60°	217.9	16.0
60°-70°	146.9	10.8
70°-80°	64.5	4.7
80°-90°	10.5	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°	411.4	30.2
0°-40°	667.5	48.9
0°-60°	1142.1	83.7
0°-90°	1364.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1364.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	541	541	541	541	541	
5°	537	536	538	536	549	51
15°	514	509	512	514	515	143
25°	460	462	470	476	475	213
35°	400	402	411	420	420	249
45°	322	328	334	342	334	249
55°	241	239	246	244	244	214
65°	148	146	152	146	147	147
75°	62	60	61	57	59	66
85°	8	7	8	7	7	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	541.2	541.2	541.2	541.2	541.2
2.5°	545.9	541.8	537.9	542.4	545.1
5°	537.4	536.1	537.6	536.0	548.9
7.5°	526.3	531.1	533.9	532.2	533.0
10°	520.4	518.8	525.0	529.3	528.7
12.5°	514.2	516.7	517.0	521.7	522.1
15°	514.5	508.6	511.7	514.4	514.6
17.5°	494.5	501.0	503.1	509.2	501.7
20°	492.1	487.4	492.1	498.3	497.3
22.5°	477.1	471.8	481.9	487.4	487.0
25°	460.0	462.5	470.1	476.2	475.2
27.5°	445.0	448.0	458.7	467.2	461.8
30°	433.5	432.1	441.1	448.7	452.9
32.5°	412.9	418.2	428.8	436.3	432.3
35°	400.4	401.6	410.9	420.4	420.1
37.5°	378.5	384.0	397.1	399.8	397.3
40°	359.9	365.4	377.2	380.1	378.9
42.5°	346.1	347.1	357.2	360.5	355.3
45°	322.1	328.1	333.6	342.2	334.1
47.5°	301.7	304.5	316.3	318.6	314.3
50°	283.2	284.2	296.0	293.1	290.3
52.5°	259.9	264.1	270.7	270.1	266.9
55°	240.8	239.2	245.5	243.8	243.7
57.5°	217.8	220.6	225.8	223.1	218.9
60°	196.3	196.4	198.2	195.2	194.7
62.5°	172.3	173.2	173.6	169.9	175.9
65°	147.9	146.0	151.7	145.9	146.9
67.5°	125.5	126.5	125.9	122.3	123.7
70°	102.7	104.0	103.1	98.9	100.2
72.5°	81.9	80.4	81.3	76.2	78.5
75°	61.6	60.3	61.4	57.1	59.0
77.5°	41.9	42.9	42.2	39.9	41.2
80°	27.7	26.9	26.9	25.6	25.9
82.5°	16.1	15.4	15.2	14.7	15.4
85°	7.5	7.3	7.5	7.3	7.0
87.5°	2.7	2.8	2.8	2.7	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)