

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: P589994

Luminaire Tested: FSR-24-2-LD4-1LO-40-UNV-82-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589994
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-82-94-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1372.0 lumens
Efficiency: N/A
Efficacy: 117.3 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

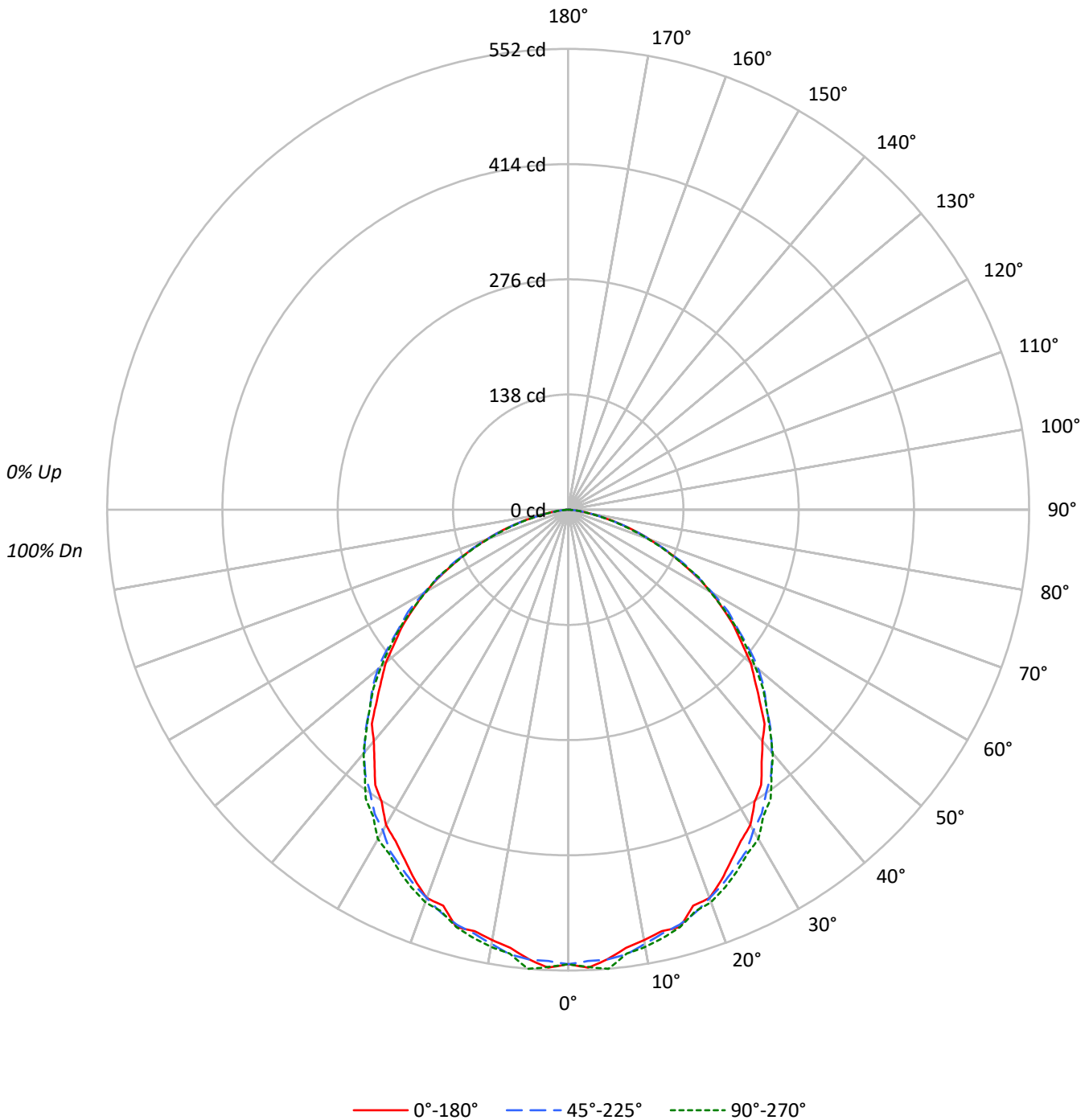
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1465	1465	1465
5°	1460	1461	1491
10°	1430	1443	1453
15°	1442	1434	1442
20°	1418	1418	1432
25°	1374	1404	1419
30°	1355	1379	1415
35°	1323	1358	1388
40°	1272	1333	1339
45°	1233	1277	1279
50°	1193	1246	1222
55°	1136	1158	1150
60°	1062	1073	1054
65°	947	972	940
70°	813	816	793
75°	644	643	618
80°	431	420	403
85°	235	232	216

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1310 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.2	3.7
10°-20°	145.1	10.6
20°-30°	217.4	15.8
30°-40°	257.7	18.8
40°-50°	258.2	18.8
50°-60°	219.1	16.0
60°-70°	147.8	10.8
70°-80°	64.9	4.7
80°-90°	10.6	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°	413.8	30.2
0°-40°	671.5	48.9
0°-60°	1148.8	83.7
0°-90°	1372.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1372.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	544	544	544	544	544	
5°	540	539	541	539	552	51
15°	518	512	515	517	518	144
25°	463	465	473	479	478	214
35°	403	404	413	423	423	250
45°	324	330	336	344	336	251
55°	242	241	247	245	245	215
65°	149	147	153	147	148	148
75°	62	61	62	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°	544.4	544.4	544.4	544.4	544.4
2.5°	549.1	544.9	541.1	545.6	548.3
5°	540.5	539.2	540.7	539.1	552.1
7.5°	529.4	534.3	537.1	535.3	536.1
10°	523.5	521.8	528.1	532.4	531.8
12.5°	517.2	519.7	520.1	524.8	525.2
15°	517.5	511.6	514.7	517.4	517.6
17.5°	497.4	503.9	506.1	512.2	504.6
20°	495.0	490.3	495.0	501.2	500.2
22.5°	479.9	474.6	484.7	490.3	489.9
25°	462.7	465.2	472.8	479.0	478.0
27.5°	447.7	450.6	461.4	469.9	464.5
30°	436.1	434.6	443.7	451.3	455.5
32.5°	415.3	420.7	431.4	438.9	434.9
35°	402.7	403.9	413.3	422.8	422.6
37.5°	380.7	386.3	399.4	402.1	399.7
40°	362.0	367.5	379.4	382.3	381.1
42.5°	348.1	349.1	359.3	362.6	357.3
45°	324.0	330.1	335.6	344.2	336.0
47.5°	303.5	306.3	318.1	320.4	316.2
50°	284.9	285.9	297.7	294.9	292.0
52.5°	261.5	265.6	272.3	271.7	268.4
55°	242.2	240.6	246.9	245.2	245.2
57.5°	219.1	221.9	227.1	224.4	220.1
60°	197.4	197.5	199.4	196.4	195.8
62.5°	173.3	174.2	174.6	170.9	176.9
65°	148.8	146.8	152.6	146.8	147.7
67.5°	126.2	127.2	126.7	123.0	124.4
70°	103.3	104.6	103.7	99.5	100.8
72.5°	82.4	80.8	81.8	76.6	79.0
75°	61.9	60.7	61.8	57.4	59.4
77.5°	42.2	43.2	42.5	40.1	41.5
80°	27.8	27.1	27.1	25.7	26.0
82.5°	16.2	15.5	15.3	14.8	15.5
85°	7.6	7.4	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)