

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: P589960

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-82-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589960
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-82-87-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1271.0 lumens
Efficiency: N/A
Efficacy: 108.6 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

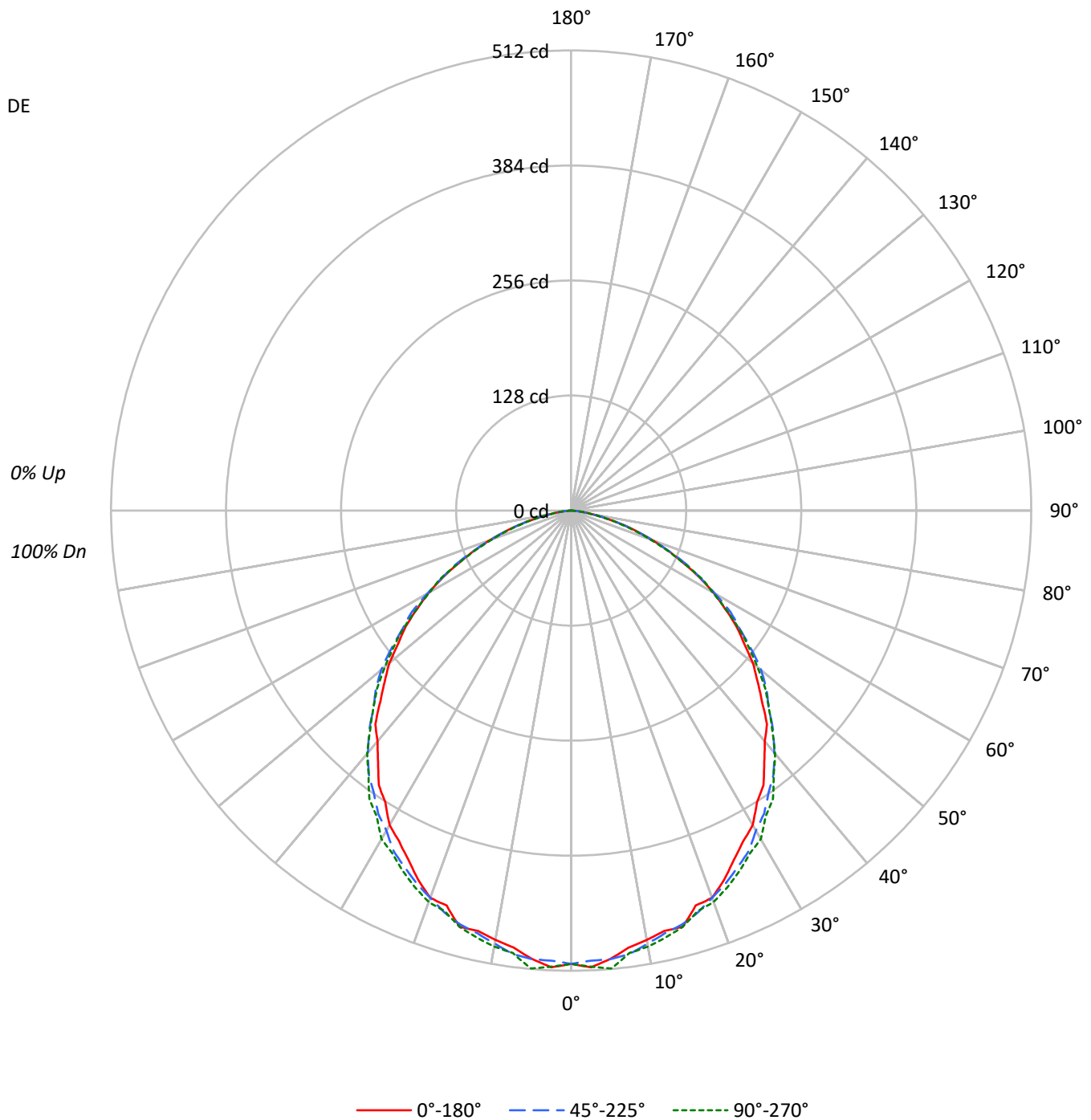
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1357	1357	1357
5°	1353	1353	1382
10°	1325	1337	1346
15°	1336	1328	1336
20°	1313	1313	1327
25°	1273	1300	1315
30°	1255	1277	1311
35°	1226	1258	1286
40°	1178	1235	1240
45°	1142	1183	1185
50°	1105	1155	1132
55°	1053	1073	1065
60°	984	994	976
65°	877	900	872
70°	753	755	735
75°	597	595	572
80°	400	389	373
85°	216	216	201

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1214 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.4	3.7
10°-20°	134.4	10.6
20°-30°	201.4	15.8
30°-40°	238.7	18.8
40°-50°	239.2	18.8
50°-60°	203.0	16.0
60°-70°	136.9	10.8
70°-80°	60.1	4.7
80°-90°	9.8	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°	383.3	30.2
0°-40°	622.0	48.9
0°-60°	1064.2	83.7
0°-90°	1271.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1271.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	504	504	504	504	504	
5°	501	500	501	499	512	47
15°	479	474	477	479	480	134
25°	429	431	438	444	443	198
35°	373	374	383	392	392	232
45°	300	306	311	319	311	232
55°	224	223	229	227	227	200
65°	138	136	141	136	137	137
75°	57	56	57	53	55	61
85°	7	7	7	7	6	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	504.3	504.3	504.3	504.3	504.3
2.5°	508.7	504.8	501.2	505.4	507.9
5°	500.7	499.5	500.9	499.4	511.5
7.5°	490.4	494.9	497.5	495.9	496.6
10°	485.0	483.4	489.2	493.2	492.6
12.5°	479.1	481.4	481.8	486.1	486.5
15°	479.4	473.9	476.8	479.3	479.5
17.5°	460.8	466.8	468.8	474.5	467.4
20°	458.5	454.2	458.5	464.3	463.4
22.5°	444.5	439.6	449.0	454.2	453.8
25°	428.6	431.0	438.0	443.7	442.8
27.5°	414.7	417.4	427.5	435.3	430.3
30°	404.0	402.6	411.1	418.1	422.0
32.5°	384.8	389.7	399.6	406.6	402.9
35°	373.1	374.2	382.9	391.7	391.5
37.5°	352.7	357.9	370.0	372.5	370.2
40°	335.3	340.5	351.5	354.1	353.0
42.5°	322.5	323.4	332.9	335.9	331.0
45°	300.2	305.8	310.8	318.9	311.3
47.5°	281.2	283.8	294.7	296.9	292.9
50°	263.9	264.8	275.8	273.1	270.5
52.5°	242.2	246.1	252.2	251.7	248.7
55°	224.4	222.9	228.7	227.2	227.1
57.5°	203.0	205.6	210.4	207.9	203.9
60°	182.9	183.0	184.7	181.9	181.4
62.5°	160.6	161.4	161.7	158.3	163.9
65°	137.8	136.0	141.4	136.0	136.9
67.5°	116.9	117.9	117.3	113.9	115.3
70°	95.7	96.9	96.0	92.2	93.4
72.5°	76.3	74.9	75.8	71.0	73.2
75°	57.4	56.2	57.2	53.2	55.0
77.5°	39.1	40.0	39.3	37.2	38.4
80°	25.8	25.1	25.1	23.8	24.1
82.5°	15.0	14.3	14.1	13.7	14.3
85°	7.0	6.8	7.0	6.8	6.5
87.5°	2.5	2.6	2.6	2.5	2.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)