

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: P560212

Luminaire Tested: FSR-12-2-LD4-2HI-35-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560212
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-12-2-LD4-2HI-35-UNV-82-86-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2822.0 lumens
Efficiency: N/A
Efficacy: 65.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

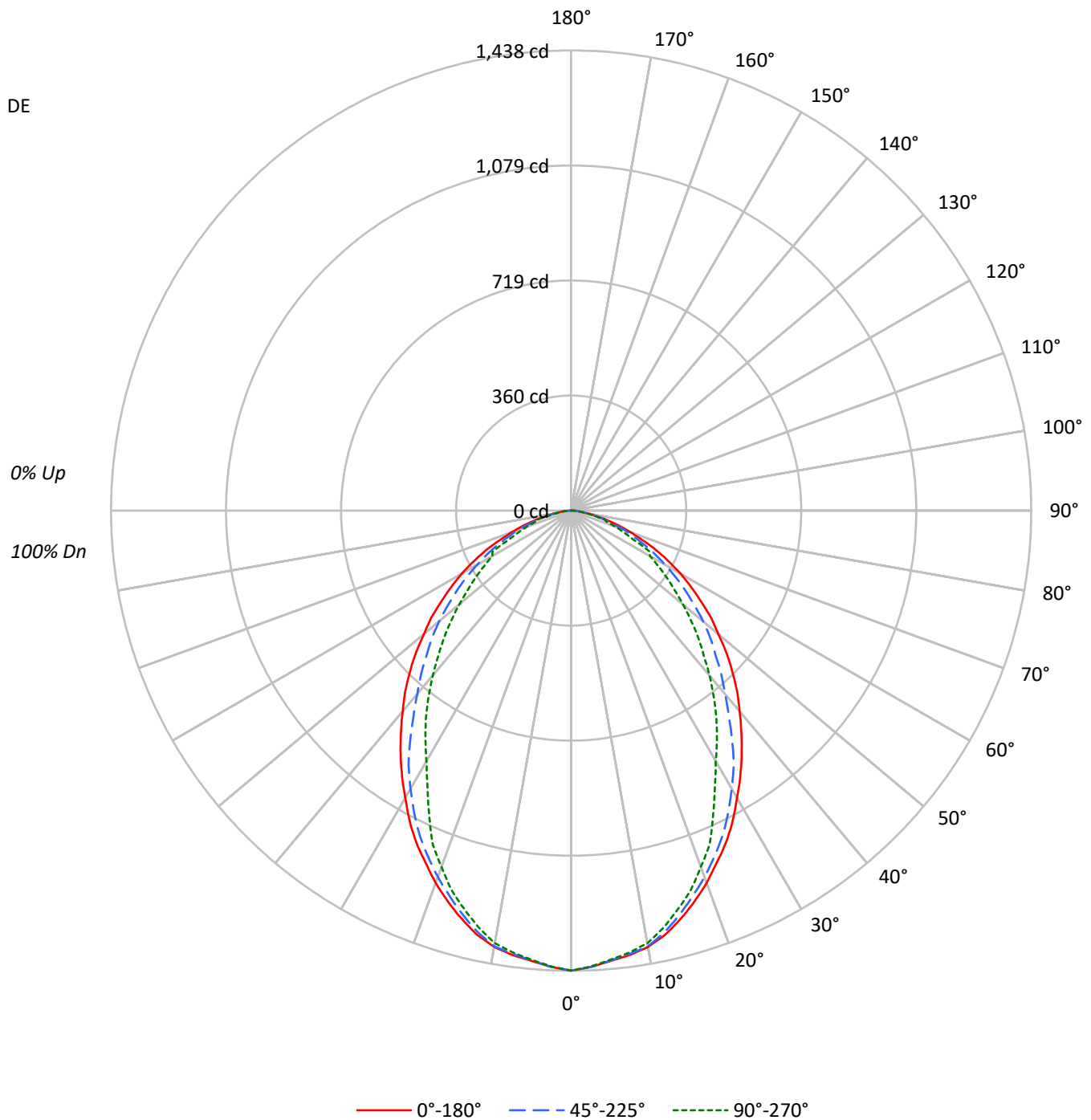
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7737	7737	7737
5°	7632	7622	7613
10°	7565	7556	7502
15°	7361	7287	7185
20°	7091	6976	6786
25°	6799	6652	6237
30°	6444	6238	5618
35°	6104	5765	5197
40°	5756	5254	4728
45°	5426	4857	4275
50°	5023	4508	3812
55°	4647	4085	3415
60°	4257	3649	3059
65°	3745	3195	2709
70°	3086	2798	2301
75°	2454	2142	2246
80°	1649	1547	1441
85°	1025	1229	1439

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5426 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.8	4.7
10°-20°	367.2	13.0
20°-30°	508.4	18.0
30°-40°	542.1	19.2
40°-50°	494.6	17.5
50°-60°	387.5	13.7
60°-70°	252.5	8.9
70°-80°	111.9	4.0
80°-90°	24.0	0.9
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°	1009.5	35.8
0°-40°	1551.6	55.0
0°-60°	2433.6	86.2
0°-90°	2822.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2822.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1438	1438	1438	1438	1438	
5°	1413	1411	1411	1409	1409	134
15°	1321	1321	1308	1295	1290	371
25°	1145	1138	1120	1080	1050	526
35°	929	922	877	811	791	581
45°	713	698	638	585	562	549
55°	495	480	435	384	364	444
65°	294	278	251	256	213	290
75°	118	110	103	98	108	126
85°	17	18	20	22	23	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1437.5	1437.5	1437.5	1437.5	1437.5
2.5°	1427.5	1427.5	1427.5	1425.9	1425.9
5°	1412.6	1410.9	1410.9	1409.2	1409.2
7.5°	1400.9	1399.3	1397.6	1395.9	1392.6
10°	1384.3	1384.3	1382.6	1374.3	1372.7
12.5°	1357.7	1356.1	1349.4	1337.8	1334.5
15°	1321.2	1321.2	1307.9	1294.6	1289.6
17.5°	1281.3	1279.6	1263.0	1249.7	1243.1
20°	1238.1	1234.7	1218.1	1196.5	1184.9
22.5°	1189.9	1189.9	1169.9	1141.7	1130.0
25°	1145.0	1138.4	1120.1	1080.2	1050.3
27.5°	1093.5	1083.5	1063.6	1007.1	972.2
30°	1037.0	1032.0	1003.7	930.6	904.0
32.5°	983.8	975.5	945.6	869.1	847.5
35°	929.0	922.3	877.4	811.0	791.0
37.5°	874.1	865.8	809.3	756.1	731.2
40°	819.3	809.3	747.8	699.6	673.0
42.5°	767.8	754.5	694.6	643.1	613.2
45°	712.9	698.0	638.1	585.0	561.7
47.5°	658.1	644.8	590.0	535.1	508.5
50°	599.9	588.3	538.4	483.6	455.3
52.5°	551.7	533.4	485.3	430.4	407.2
55°	495.2	480.3	435.4	383.9	363.9
57.5°	443.7	428.8	387.2	339.0	322.4
60°	395.5	373.9	339.0	297.5	284.2
62.5°	342.3	325.7	295.8	260.9	277.5
65°	294.1	277.5	250.9	255.9	212.7
67.5°	241.0	232.7	209.4	186.1	179.5
70°	196.1	186.1	177.8	152.9	146.2
72.5°	156.2	146.2	134.6	121.3	116.3
75°	118.0	109.7	103.0	98.0	108.0
77.5°	81.4	78.1	73.1	68.1	66.5
80°	53.2	51.5	49.9	48.2	46.5
82.5°	31.6	31.6	31.6	31.6	31.6
85°	16.6	18.3	19.9	21.6	23.3
87.5°	10.0	10.0	11.6	13.3	15.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)