

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: P589985

Luminaire Tested: FSR-24-2-LD4-1LO-40-UNV-81-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589985
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-81-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1180.0 lumens
Efficiency: N/A
Efficacy: 100.9 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

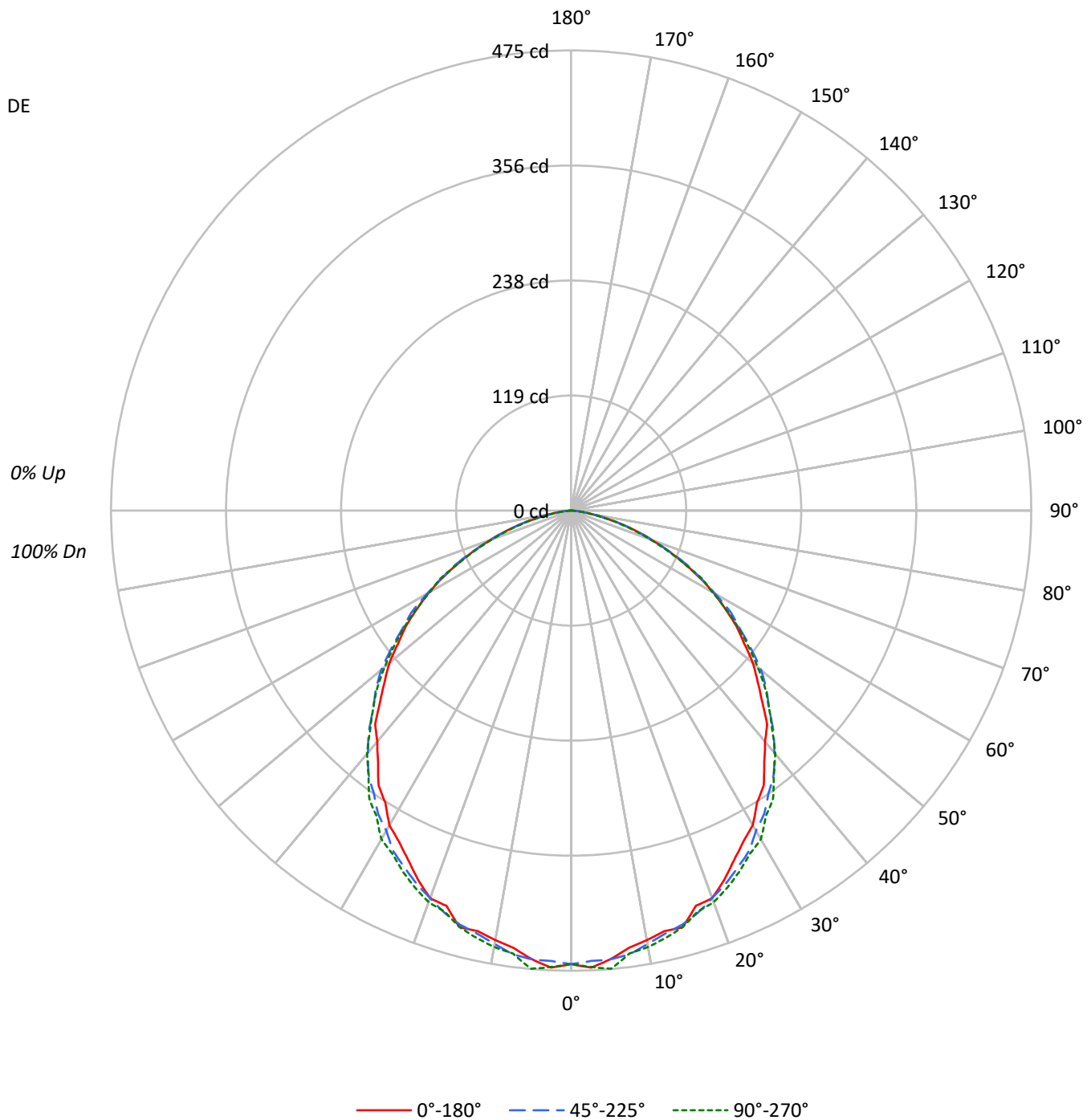
Input Watts (W): 11.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1260	1260	1260
5°	1256	1256	1283
10°	1230	1241	1250
15°	1240	1233	1240
20°	1219	1219	1232
25°	1181	1208	1221
30°	1165	1186	1217
35°	1138	1168	1194
40°	1094	1146	1152
45°	1061	1098	1100
50°	1026	1072	1052
55°	977	996	989
60°	914	923	906
65°	815	835	809
70°	699	702	682
75°	554	552	531
80°	370	361	347
85°	201	201	185

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 1126 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.0	3.7
10°-20°	124.8	10.6
20°-30°	187.0	15.8
30°-40°	221.6	18.8
40°-50°	222.0	18.8
50°-60°	188.5	16.0
60°-70°	127.1	10.8
70°-80°	55.8	4.7
80°-90°	9.1	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°	355.9	30.2
0°-40°	577.5	48.9
0°-60°	988.0	83.7
0°-90°	1180.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1180.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	468	468	468	468	468	
5°	465	464	465	464	475	44
15°	445	440	443	445	445	124
25°	398	400	407	412	411	184
35°	346	347	356	364	363	215
45°	279	284	289	296	289	216
55°	208	207	212	211	211	185
65°	128	126	131	126	127	127
75°	53	52	53	49	51	57
85°	6	6	6	6	6	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	468.2	468.2	468.2	468.2	468.2
2.5°	472.2	468.7	465.4	469.2	471.6
5°	464.9	463.8	465.1	463.7	474.8
7.5°	455.3	459.5	461.9	460.4	461.1
10°	450.2	448.8	454.2	457.9	457.4
12.5°	444.8	447.0	447.3	451.3	451.7
15°	445.1	440.0	442.7	445.0	445.2
17.5°	427.8	433.4	435.2	440.5	434.0
20°	425.7	421.6	425.7	431.1	430.2
22.5°	412.7	408.2	416.9	421.6	421.3
25°	397.9	400.1	406.7	412.0	411.1
27.5°	385.0	387.6	396.9	404.2	399.5
30°	375.0	373.8	381.6	388.2	391.8
32.5°	357.2	361.8	371.0	377.5	374.0
35°	346.4	347.4	355.5	363.7	363.4
37.5°	327.5	332.2	343.5	345.8	343.7
40°	311.3	316.1	326.3	328.8	327.8
42.5°	299.4	300.3	309.0	311.9	307.3
45°	278.7	283.9	288.6	296.0	289.0
47.5°	261.0	263.4	273.6	275.6	271.9
50°	245.0	245.9	256.1	253.6	251.2
52.5°	224.9	228.4	234.2	233.7	230.9
55°	208.3	206.9	212.4	210.9	210.9
57.5°	188.4	190.8	195.3	193.0	189.3
60°	169.8	169.9	171.5	168.9	168.4
62.5°	149.1	149.8	150.2	147.0	152.2
65°	128.0	126.3	131.2	126.2	127.1
67.5°	108.6	109.4	108.9	105.8	107.0
70°	88.9	90.0	89.2	85.6	86.7
72.5°	70.8	69.5	70.4	65.9	67.9
75°	53.3	52.2	53.1	49.4	51.1
77.5°	36.3	37.1	36.5	34.5	35.7
80°	23.9	23.3	23.3	22.1	22.4
82.5°	14.0	13.3	13.1	12.8	13.3
85°	6.5	6.3	6.5	6.3	6.0
87.5°	2.4	2.4	2.4	2.3	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)