

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: P560084

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560084
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-LD4-1STD-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1167.0 lumens
Efficiency: N/A
Efficacy: 70.3 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

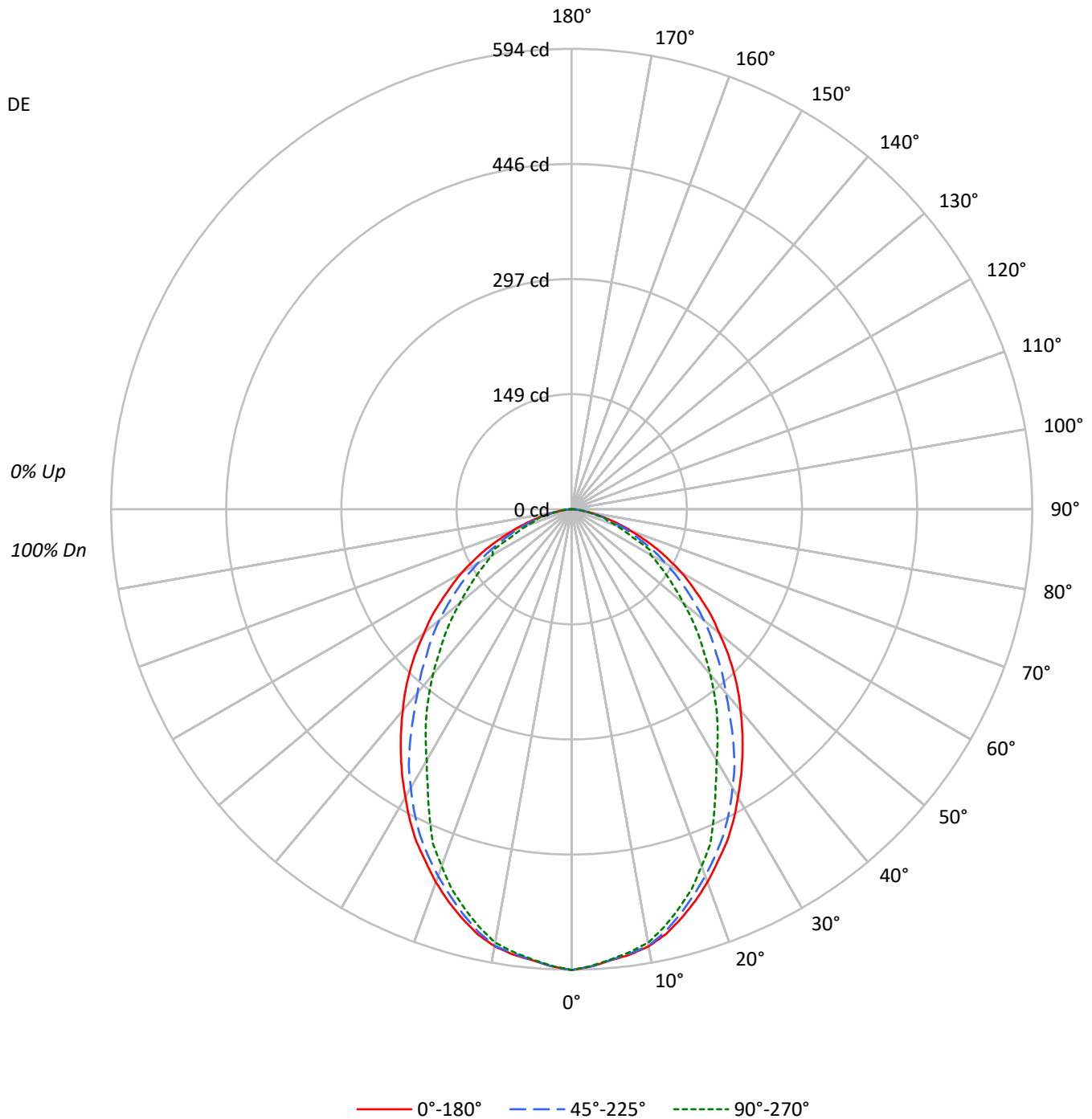
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3200	3200	3200
5°	3156	3152	3149
10°	3129	3125	3102
15°	3044	3014	2971
20°	2932	2885	2806
25°	2812	2751	2579
30°	2665	2580	2324
35°	2524	2384	2149
40°	2380	2173	1955
45°	2244	2009	1768
50°	2077	1865	1577
55°	1922	1690	1412
60°	1761	1509	1265
65°	1549	1322	1121
70°	1276	1157	952
75°	1015	886	930
80°	682	638	595
85°	426	506	593

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2244 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.3	4.7
10°-20°	151.9	13.0
20°-30°	210.2	18.0
30°-40°	224.2	19.2
40°-50°	204.5	17.5
50°-60°	160.2	13.7
60°-70°	104.4	8.9
70°-80°	46.3	4.0
80°-90°	9.9	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°	417.4	35.8
0°-40°	641.6	55.0
0°-60°	1006.4	86.2
0°-90°	1167.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1167.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	594	594	594	594	594	
5°	584	584	584	583	583	55
15°	546	546	541	535	533	154
25°	474	471	463	447	434	217
35°	384	381	363	335	327	240
45°	295	289	264	242	232	227
55°	205	199	180	159	150	184
65°	122	115	104	106	88	120
75°	49	45	43	40	45	52
85°	7	8	8	9	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	594.5	594.5	594.5	594.5	594.5
2.5°	590.3	590.3	590.3	589.6	589.6
5°	584.1	583.5	583.5	582.8	582.8
7.5°	579.3	578.6	578.0	577.3	575.9
10°	572.5	572.5	571.8	568.3	567.7
12.5°	561.5	560.8	558.0	553.2	551.8
15°	546.3	546.3	540.9	535.4	533.3
17.5°	529.9	529.2	522.3	516.8	514.0
20°	512.0	510.6	503.7	494.8	490.0
22.5°	492.1	492.1	483.8	472.1	467.3
25°	473.5	470.8	463.2	446.7	434.3
27.5°	452.2	448.1	439.8	416.5	402.0
30°	428.8	426.8	415.1	384.8	373.9
32.5°	406.8	403.4	391.0	359.4	350.5
35°	384.2	381.4	362.9	335.4	327.1
37.5°	361.5	358.0	334.7	312.7	302.4
40°	338.8	334.7	309.3	289.3	278.3
42.5°	317.5	312.0	287.3	266.0	253.6
45°	294.8	288.6	263.9	241.9	232.3
47.5°	272.1	266.6	244.0	221.3	210.3
50°	248.1	243.3	222.7	200.0	188.3
52.5°	228.2	220.6	200.7	178.0	168.4
55°	204.8	198.6	180.1	158.8	150.5
57.5°	183.5	177.3	160.1	140.2	133.3
60°	163.6	154.6	140.2	123.0	117.5
62.5°	141.6	134.7	122.3	107.9	114.8
65°	121.6	114.8	103.8	105.8	88.0
67.5°	99.6	96.2	86.6	77.0	74.2
70°	81.1	77.0	73.5	63.2	60.5
72.5°	64.6	60.5	55.7	50.2	48.1
75°	48.8	45.4	42.6	40.5	44.7
77.5°	33.7	32.3	30.2	28.2	27.5
80°	22.0	21.3	20.6	19.9	19.2
82.5°	13.1	13.1	13.1	13.1	13.1
85°	6.9	7.6	8.2	8.9	9.6
87.5°	4.1	4.1	4.8	5.5	6.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)