

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: P560170

Luminaire Tested: FSR-12-2-LD4-1STD-50-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560170
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-50-UNV-93-94-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1369.0 lumens
Efficiency: N/A
Efficacy: 82.5 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

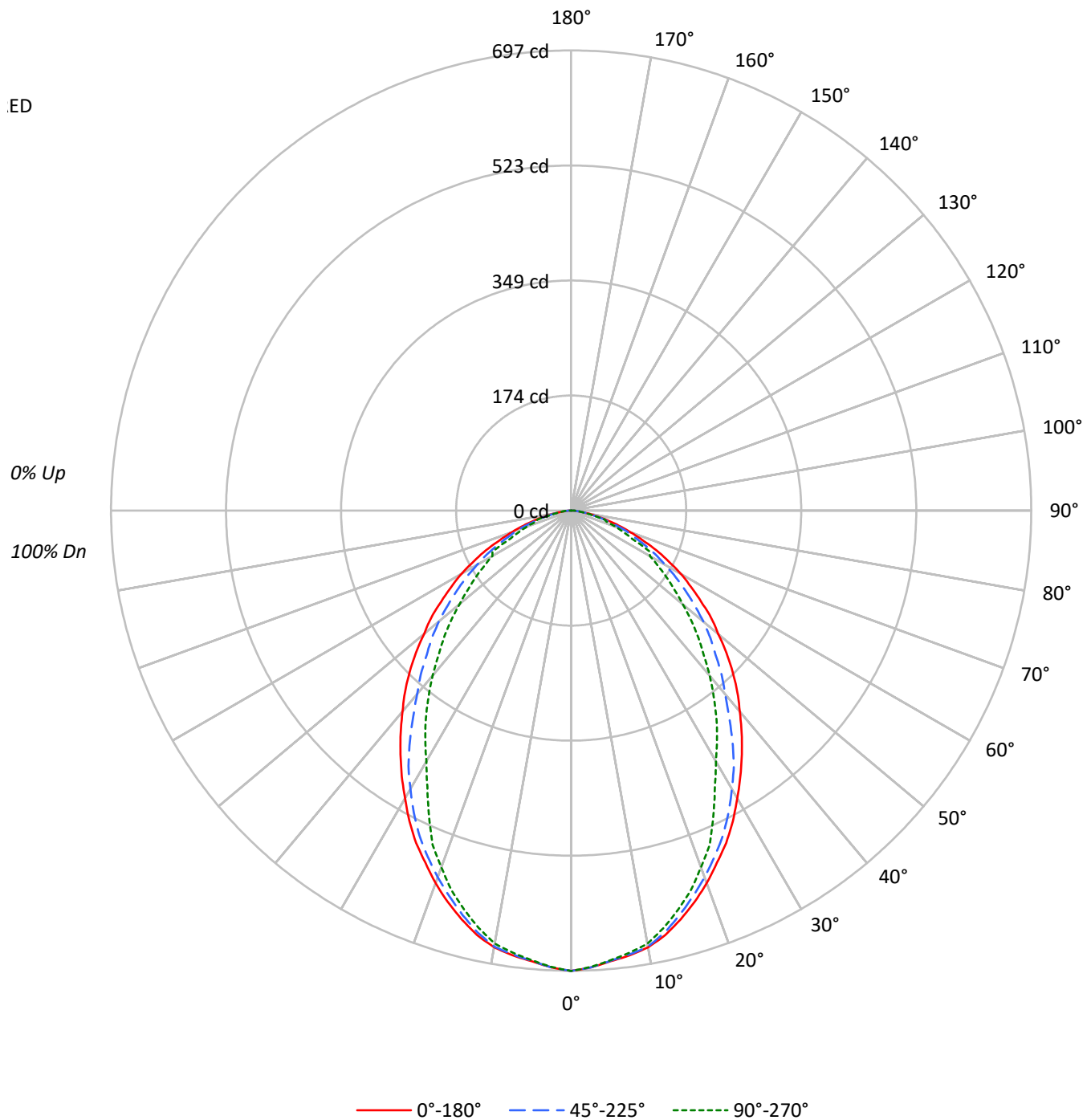
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3753	3753	3753
5°	3702	3698	3693
10°	3670	3665	3639
15°	3571	3535	3486
20°	3440	3384	3292
25°	3299	3227	3026
30°	3127	3026	2726
35°	2961	2797	2521
40°	2792	2549	2294
45°	2633	2356	2074
50°	2436	2187	1850
55°	2254	1982	1657
60°	2066	1771	1484
65°	1817	1550	1314
70°	1496	1358	1116
75°	1189	1040	1090
80°	800	750	700
85°	500	599	698

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2633 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.9	4.7
10°-20°	178.2	13.0
20°-30°	246.6	18.0
30°-40°	263.0	19.2
40°-50°	239.9	17.5
50°-60°	188.0	13.7
60°-70°	122.5	8.9
70°-80°	54.3	4.0
80°-90°	11.6	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°	489.7	35.8
0°-40°	752.7	55.0
0°-60°	1180.6	86.2
0°-90°	1369.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1369.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	697	697	697	697	697	
5°	685	684	684	684	684	65
15°	641	641	634	628	626	180
25°	556	552	543	524	510	255
35°	451	447	426	393	384	282
45°	346	339	310	284	272	266
55°	240	233	211	186	177	215
65°	143	135	122	124	103	141
75°	57	53	50	48	52	61
85°	8	9	10	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	697.4	697.4	697.4	697.4	697.4
2.5°	692.5	692.5	692.5	691.7	691.7
5°	685.3	684.5	684.5	683.6	683.6
7.5°	679.6	678.8	678.0	677.2	675.6
10°	671.6	671.6	670.7	666.7	665.9
12.5°	658.7	657.8	654.6	649.0	647.4
15°	640.9	640.9	634.5	628.0	625.6
17.5°	621.6	620.8	612.7	606.3	603.0
20°	600.6	599.0	590.9	580.5	574.8
22.5°	577.2	577.2	567.6	553.8	548.2
25°	555.5	552.2	543.4	524.0	509.5
27.5°	530.5	525.6	516.0	488.5	471.6
30°	503.1	500.6	486.9	451.5	438.6
32.5°	477.3	473.2	458.7	421.6	411.2
35°	450.7	447.4	425.7	393.4	383.7
37.5°	424.1	420.0	392.6	366.8	354.7
40°	397.4	392.6	362.8	339.4	326.5
42.5°	372.5	366.0	337.0	312.0	297.5
45°	345.9	338.6	309.6	283.8	272.5
47.5°	319.2	312.8	286.2	259.6	246.7
50°	291.0	285.4	261.2	234.6	220.9
52.5°	267.7	258.8	235.4	208.8	197.5
55°	240.2	233.0	211.2	186.2	176.6
57.5°	215.3	208.0	187.8	164.5	156.4
60°	191.9	181.4	164.5	144.3	137.9
62.5°	166.1	158.0	143.5	126.6	134.6
65°	142.7	134.6	121.7	124.2	103.2
67.5°	116.9	112.9	101.6	90.3	87.1
70°	95.1	90.3	86.3	74.2	70.9
72.5°	75.8	70.9	65.3	58.9	56.4
75°	57.2	53.2	50.0	47.6	52.4
77.5°	39.5	37.9	35.5	33.1	32.2
80°	25.8	25.0	24.2	23.4	22.6
82.5°	15.3	15.3	15.3	15.3	15.3
85°	8.1	8.9	9.7	10.5	11.3
87.5°	4.8	4.8	5.6	6.4	7.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)