

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: P560128

Luminaire Tested: FSR-12-2-LD4-1STD-50-UNV-81-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560128
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-81-84-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1295.0 lumens
Efficiency: N/A
Efficacy: 78.0 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

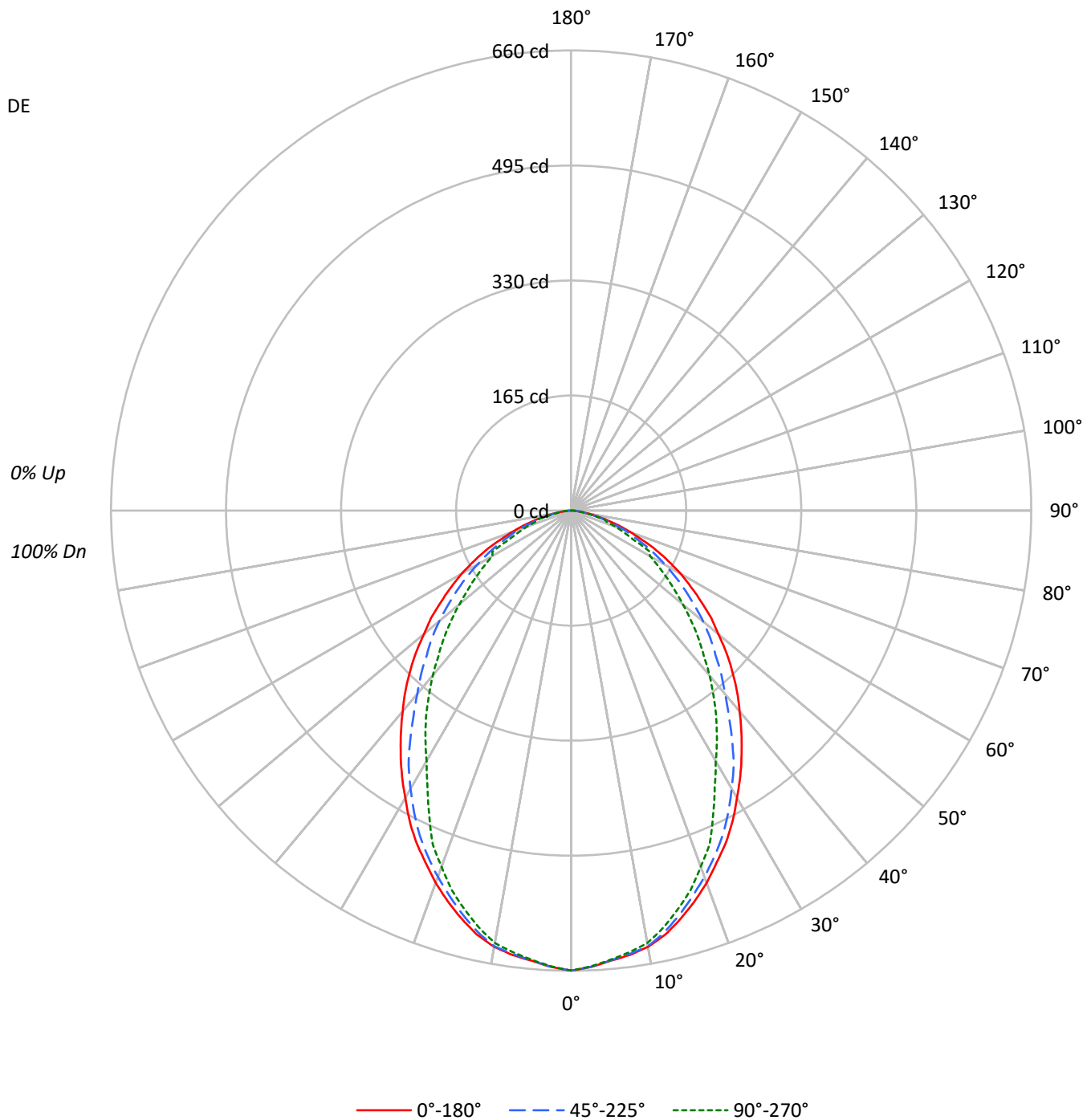
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3550	3550	3550
5°	3502	3498	3494
10°	3472	3468	3442
15°	3378	3344	3297
20°	3254	3202	3114
25°	3120	3052	2862
30°	2958	2862	2578
35°	2801	2646	2385
40°	2642	2411	2170
45°	2490	2229	1962
50°	2305	2069	1750
55°	2133	1875	1567
60°	1954	1675	1404
65°	1719	1467	1243
70°	1416	1284	1056
75°	1125	984	1031
80°	756	710	663
85°	469	568	661

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2490 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.4	4.7
10°-20°	168.5	13.0
20°-30°	233.3	18.0
30°-40°	248.8	19.2
40°-50°	227.0	17.5
50°-60°	177.8	13.7
60°-70°	115.9	8.9
70°-80°	51.3	4.0
80°-90°	11.0	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°	463.2	35.8
0°-40°	712.0	55.0
0°-60°	1116.8	86.2
0°-90°	1295.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1295.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	660	660	660	660	660	
5°	648	648	648	647	647	62
15°	606	606	600	594	592	170
25°	525	522	514	496	482	241
35°	426	423	403	372	363	267
45°	327	320	293	268	258	252
55°	227	220	200	176	167	204
65°	135	127	115	117	98	133
75°	54	50	47	45	50	58
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	659.7	659.7	659.7	659.7	659.7
2.5°	655.1	655.1	655.1	654.3	654.3
5°	648.2	647.5	647.5	646.7	646.7
7.5°	642.9	642.1	641.4	640.6	639.1
10°	635.3	635.3	634.5	630.7	629.9
12.5°	623.1	622.3	619.2	613.9	612.4
15°	606.3	606.3	600.2	594.1	591.8
17.5°	588.0	587.2	579.6	573.5	570.4
20°	568.1	566.6	559.0	549.1	543.7
22.5°	546.0	546.0	536.9	523.9	518.6
25°	525.4	522.4	514.0	495.7	482.0
27.5°	501.8	497.2	488.1	462.1	446.1
30°	475.9	473.6	460.6	427.1	414.9
32.5°	451.5	447.7	433.9	398.8	388.9
35°	426.3	423.2	402.7	372.2	363.0
37.5°	401.1	397.3	371.4	347.0	335.5
40°	376.0	371.4	343.2	321.1	308.9
42.5°	352.3	346.2	318.8	295.1	281.4
45°	327.2	320.3	292.8	268.4	257.8
47.5°	302.0	295.9	270.7	245.6	233.4
50°	275.3	270.0	247.1	221.9	209.0
52.5°	253.2	244.8	222.7	197.5	186.8
55°	227.3	220.4	199.8	176.2	167.0
57.5°	203.6	196.8	177.7	155.6	147.9
60°	181.5	171.6	155.6	136.5	130.4
62.5°	157.1	149.5	135.7	119.7	127.4
65°	135.0	127.4	115.2	117.4	97.6
67.5°	110.6	106.8	96.1	85.4	82.4
70°	90.0	85.4	81.6	70.2	67.1
72.5°	71.7	67.1	61.8	55.7	53.4
75°	54.1	50.3	47.3	45.0	49.6
77.5°	37.4	35.8	33.6	31.3	30.5
80°	24.4	23.6	22.9	22.1	21.4
82.5°	14.5	14.5	14.5	14.5	14.5
85°	7.6	8.4	9.2	9.9	10.7
87.5°	4.6	4.6	5.3	6.1	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)