

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: P560165

Luminaire Tested: FSR-12-2-LD4-1STD-50-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560165
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-93-86-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1521.0 lumens
Efficiency: N/A
Efficacy: 91.6 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

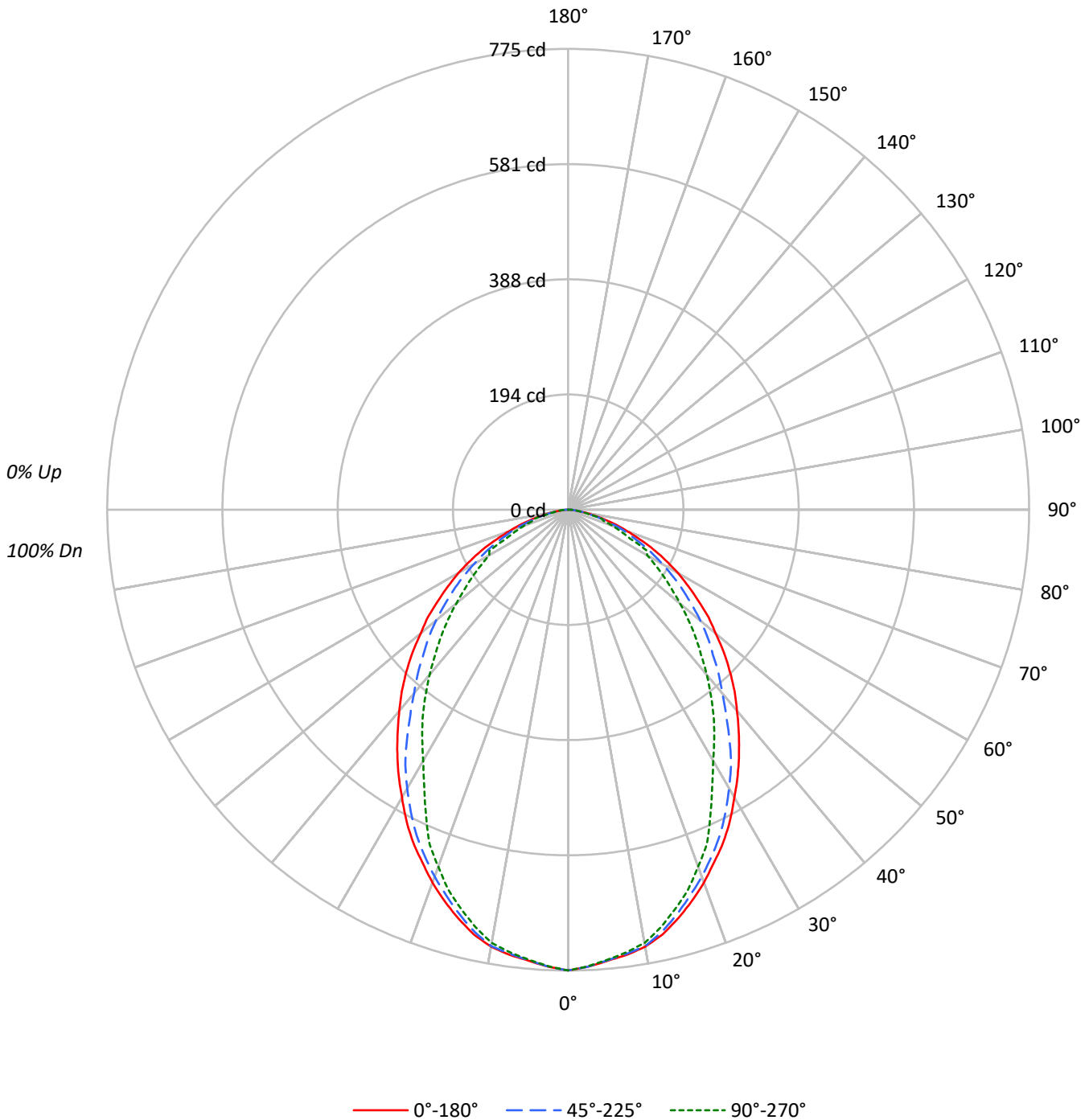
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4170	4170	4170
5°	4113	4108	4104
10°	4077	4073	4043
15°	3968	3928	3873
20°	3822	3760	3657
25°	3665	3585	3362
30°	3473	3362	3028
35°	3290	3107	2802
40°	3103	2832	2549
45°	2925	2618	2304
50°	2707	2430	2055
55°	2504	2202	1841
60°	2295	1967	1649
65°	2018	1723	1459
70°	1663	1507	1240
75°	1323	1154	1210
80°	890	834	778
85°	556	661	772

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2925 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.1	4.7
10°-20°	197.9	13.0
20°-30°	274.0	18.0
30°-40°	292.2	19.2
40°-50°	266.6	17.5
50°-60°	208.8	13.7
60°-70°	136.1	8.9
70°-80°	60.3	4.0
80°-90°	13.0	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°	544.1	35.8
0°-40°	836.3	55.0
0°-60°	1311.6	86.2
0°-90°	1521.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1521.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	775	775	775	775	775	
5°	761	760	760	760	760	72
15°	712	712	705	698	695	200
25°	617	614	604	582	566	283
35°	501	497	473	437	426	313
45°	384	376	344	315	303	296
55°	267	259	235	207	196	239
65°	158	150	135	138	115	156
75°	64	59	56	53	58	68
85°	9	10	11	12	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	774.8	774.8	774.8	774.8	774.8
2.5°	769.4	769.4	769.4	768.5	768.5
5°	761.3	760.4	760.4	759.6	759.6
7.5°	755.1	754.2	753.3	752.4	750.6
10°	746.1	746.1	745.2	740.7	739.8
12.5°	731.8	730.9	727.3	721.0	719.2
15°	712.1	712.1	704.9	697.7	695.1
17.5°	690.6	689.7	680.7	673.6	670.0
20°	667.3	665.5	656.5	644.9	638.6
22.5°	641.3	641.3	630.6	615.3	609.1
25°	617.1	613.6	603.7	582.2	566.1
27.5°	589.4	584.0	573.2	542.8	524.0
30°	558.9	556.2	541.0	501.6	487.3
32.5°	530.3	525.8	509.7	468.4	456.8
35°	500.7	497.1	472.9	437.1	426.4
37.5°	471.1	466.7	436.2	407.5	394.1
40°	441.6	436.2	403.1	377.1	362.8
42.5°	413.8	406.6	374.4	346.6	330.5
45°	384.3	376.2	343.9	315.3	302.7
47.5°	354.7	347.5	318.0	288.4	274.1
50°	323.3	317.1	290.2	260.6	245.4
52.5°	297.4	287.5	261.5	232.0	219.4
55°	266.9	258.9	234.7	206.9	196.2
57.5°	239.2	231.1	208.7	182.7	173.8
60°	213.2	201.5	182.7	160.3	153.2
62.5°	184.5	175.6	159.4	140.6	149.6
65°	158.5	149.6	135.3	137.9	114.6
67.5°	129.9	125.4	112.9	100.3	96.7
70°	105.7	100.3	95.8	82.4	78.8
72.5°	84.2	78.8	72.6	65.4	62.7
75°	63.6	59.1	55.5	52.8	58.2
77.5°	43.9	42.1	39.4	36.7	35.8
80°	28.7	27.8	26.9	26.0	25.1
82.5°	17.0	17.0	17.0	17.0	17.0
85°	9.0	9.9	10.7	11.6	12.5
87.5°	5.4	5.4	6.3	7.2	8.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)