

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: P590066

Luminaire Tested: FSR-24-2-LD4-1STD-35-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590066
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-LD4-1STD-35-UNV-93-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1960.0 lumens
Efficiency: N/A
Efficacy: 118.1 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

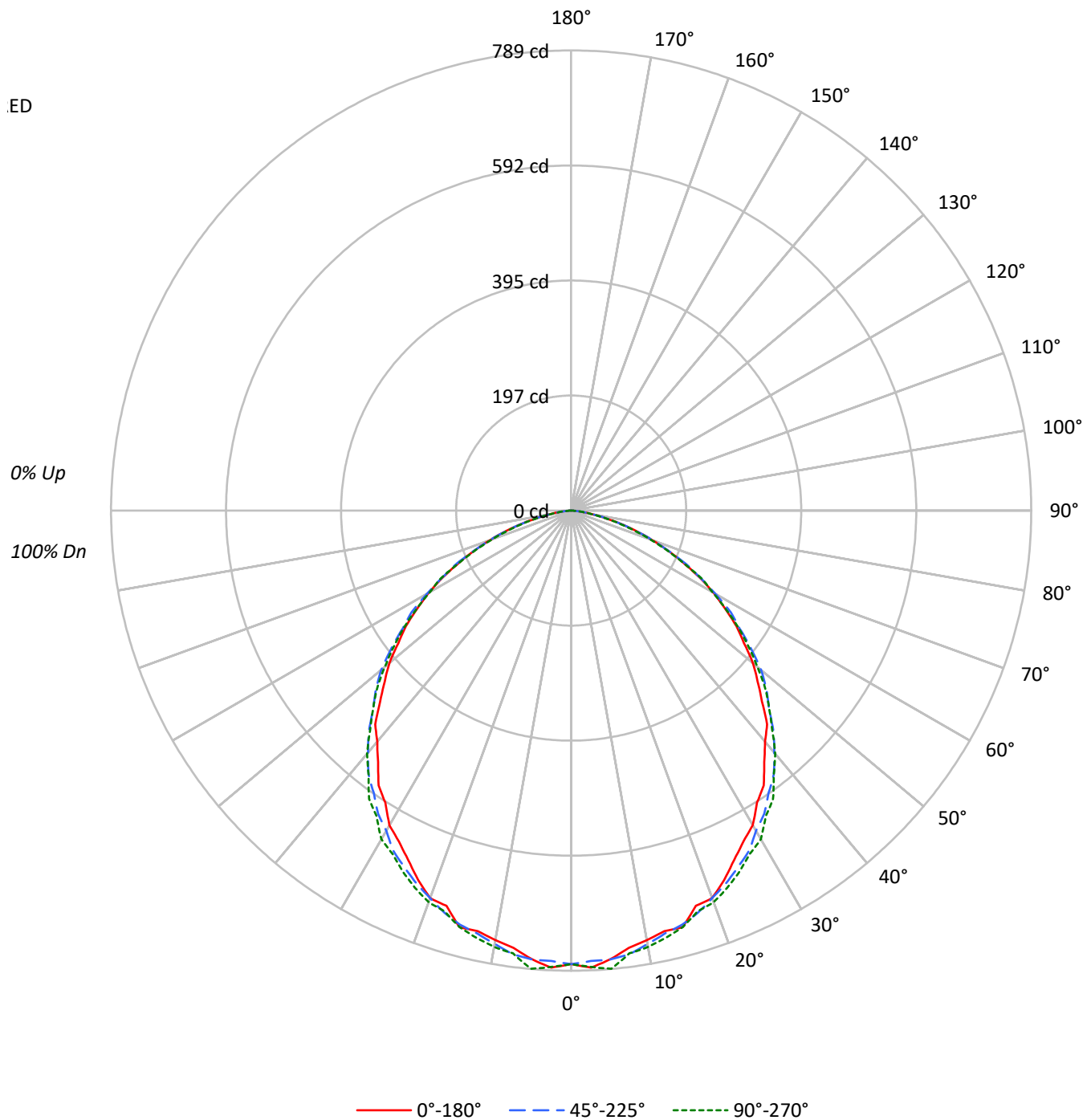
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2093	2093	2093
5°	2086	2087	2130
10°	2044	2061	2076
15°	2060	2048	2060
20°	2025	2025	2046
25°	1963	2006	2028
30°	1936	1970	2022
35°	1890	1940	1983
40°	1816	1904	1912
45°	1762	1824	1827
50°	1704	1780	1747
55°	1623	1655	1643
60°	1518	1533	1505
65°	1354	1388	1344
70°	1161	1165	1133
75°	920	918	882
80°	617	600	576
85°	333	330	309

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1871 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.2	3.7
10°-20°	207.3	10.6
20°-30°	310.6	15.8
30°-40°	368.1	18.8
40°-50°	368.8	18.8
50°-60°	313.1	16.0
60°-70°	211.1	10.8
70°-80°	92.8	4.7
80°-90°	15.1	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°	591.1	30.2
0°-40°	959.2	48.9
0°-60°	1641.1	83.7
0°-90°	1960.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1960.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	778	778	778	778	778	
5°	772	770	772	770	789	73
15°	739	731	735	739	739	206
25°	661	665	676	684	683	306
35°	575	577	590	604	604	357
45°	463	472	479	492	480	358
55°	346	344	353	350	350	308
65°	213	210	218	210	211	211
75°	88	87	88	82	85	95
85°	11	10	11	10	10	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	777.7	777.7	777.7	777.7	777.7
2.5°	784.4	778.5	773.0	779.4	783.3
5°	772.2	770.3	772.5	770.1	788.7
7.5°	756.3	763.2	767.2	764.7	765.8
10°	747.9	745.4	754.4	760.6	759.7
12.5°	738.8	742.4	742.9	749.7	750.3
15°	739.3	730.8	735.3	739.1	739.4
17.5°	710.6	719.8	723.0	731.7	720.8
20°	707.1	700.4	707.1	716.0	714.6
22.5°	685.5	678.0	692.4	700.4	699.9
25°	661.0	664.6	675.5	684.3	682.9
27.5°	639.5	643.7	659.2	671.3	663.5
30°	622.9	620.8	633.9	644.7	650.8
32.5°	593.3	601.0	616.2	627.0	621.2
35°	575.4	577.1	590.4	604.1	603.7
37.5°	543.9	551.9	570.6	574.4	570.9
40°	517.1	525.0	542.0	546.1	544.4
42.5°	497.3	498.7	513.3	518.0	510.5
45°	462.9	471.5	479.4	491.7	480.1
47.5°	433.6	437.6	454.5	457.8	451.6
50°	407.0	408.4	425.3	421.2	417.2
52.5°	373.5	379.5	389.0	388.2	383.5
55°	346.0	343.7	352.7	350.3	350.2
57.5°	313.0	317.0	324.4	320.6	314.5
60°	282.1	282.2	284.9	280.5	279.7
62.5°	247.6	248.8	249.4	244.1	252.7
65°	212.6	209.8	218.0	209.7	211.1
67.5°	180.3	181.7	180.9	175.7	177.7
70°	147.6	149.4	148.1	142.2	144.0
72.5°	117.7	115.5	116.9	109.4	112.9
75°	88.5	86.7	88.3	82.0	84.8
77.5°	60.2	61.7	60.6	57.3	59.2
80°	39.8	38.7	38.7	36.8	37.2
82.5°	23.2	22.1	21.8	21.2	22.1
85°	10.8	10.5	10.7	10.4	10.0
87.5°	3.9	4.0	4.0	3.8	3.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)