

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: P559148

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-93-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559148
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-12-1-LD4-2HI-40-UNV-93-96-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1627.0 lumens
Efficiency: N/A
Efficacy: 75.3 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

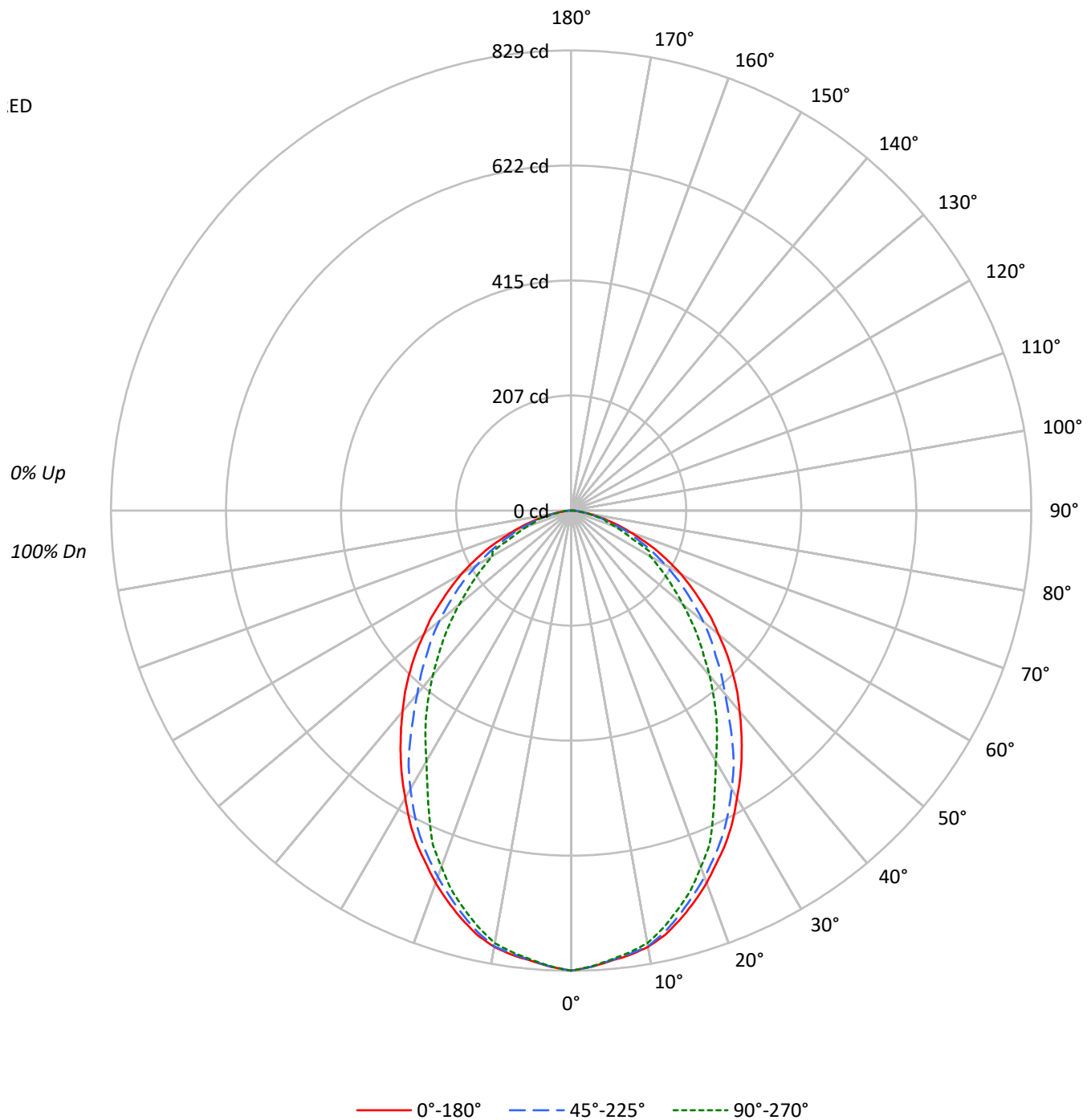
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8921	8921	8921
5°	8800	8789	8779
10°	8723	8713	8650
15°	8488	8402	8285
20°	8176	8045	7825
25°	7840	7670	7191
30°	7431	7193	6478
35°	7038	6648	5993
40°	6638	6059	5452
45°	6256	5600	4929
50°	5792	5198	4396
55°	5358	4710	3937
60°	4908	4209	3526
65°	4320	3685	3123
70°	3559	3226	2653
75°	2828	2470	2591
80°	1903	1779	1661
85°	1186	1420	1655

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6256 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.1	4.7
10°-20°	211.7	13.0
20°-30°	293.1	18.0
30°-40°	312.6	19.2
40°-50°	285.1	17.5
50°-60°	223.4	13.7
60°-70°	145.6	8.9
70°-80°	64.5	4.0
80°-90°	13.8	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°	582.0	35.8
0°-40°	894.5	55.0
0°-60°	1403.1	86.2
0°-90°	1627.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1627.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	829	829	829	829	829	
5°	814	813	813	812	812	77
15°	762	762	754	746	744	214
25°	660	656	646	623	606	303
35°	536	532	506	468	456	335
45°	411	402	368	337	324	317
55°	286	277	251	221	210	256
65°	170	160	145	148	123	167
75°	68	63	59	56	62	73
85°	10	10	12	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	828.8	828.8	828.8	828.8	828.8
2.5°	823.0	823.0	823.0	822.1	822.1
5°	814.4	813.4	813.4	812.5	812.5
7.5°	807.7	806.7	805.8	804.8	802.9
10°	798.1	798.1	797.2	792.4	791.4
12.5°	782.8	781.8	778.0	771.3	769.4
15°	761.7	761.7	754.0	746.4	743.5
17.5°	738.7	737.8	728.2	720.5	716.7
20°	713.8	711.9	702.3	689.8	683.1
22.5°	686.0	686.0	674.5	658.2	651.5
25°	660.1	656.3	645.8	622.8	605.5
27.5°	630.4	624.7	613.2	580.6	560.5
30°	597.9	595.0	578.7	536.5	521.2
32.5°	567.2	562.4	545.2	501.1	488.6
35°	535.6	531.8	505.9	467.6	456.1
37.5°	504.0	499.2	466.6	435.9	421.6
40°	472.4	466.6	431.2	403.4	388.0
42.5°	442.7	435.0	400.5	370.8	353.5
45°	411.0	402.4	367.9	337.3	323.8
47.5°	379.4	371.7	340.1	308.5	293.2
50°	345.9	339.2	310.4	278.8	262.5
52.5°	318.1	307.6	279.8	248.2	234.7
55°	285.5	276.9	251.0	221.3	209.8
57.5°	255.8	247.2	223.2	195.5	185.9
60°	228.0	215.6	195.5	171.5	163.8
62.5°	197.4	187.8	170.5	150.4	160.0
65°	169.6	160.0	144.7	147.6	122.6
67.5°	138.9	134.1	120.7	107.3	103.5
70°	113.1	107.3	102.5	88.1	84.3
72.5°	90.1	84.3	77.6	69.9	67.1
75°	68.0	63.2	59.4	56.5	62.3
77.5°	46.9	45.0	42.2	39.3	38.3
80°	30.7	29.7	28.7	27.8	26.8
82.5°	18.2	18.2	18.2	18.2	18.2
85°	9.6	10.5	11.5	12.5	13.4
87.5°	5.7	5.7	6.7	7.7	8.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)