

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: P559138

Luminaire Tested: FSR-12-1-LD4-2HI-40-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559138
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-93-85-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1609.0 lumens
Efficiency: N/A
Efficacy: 74.5 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

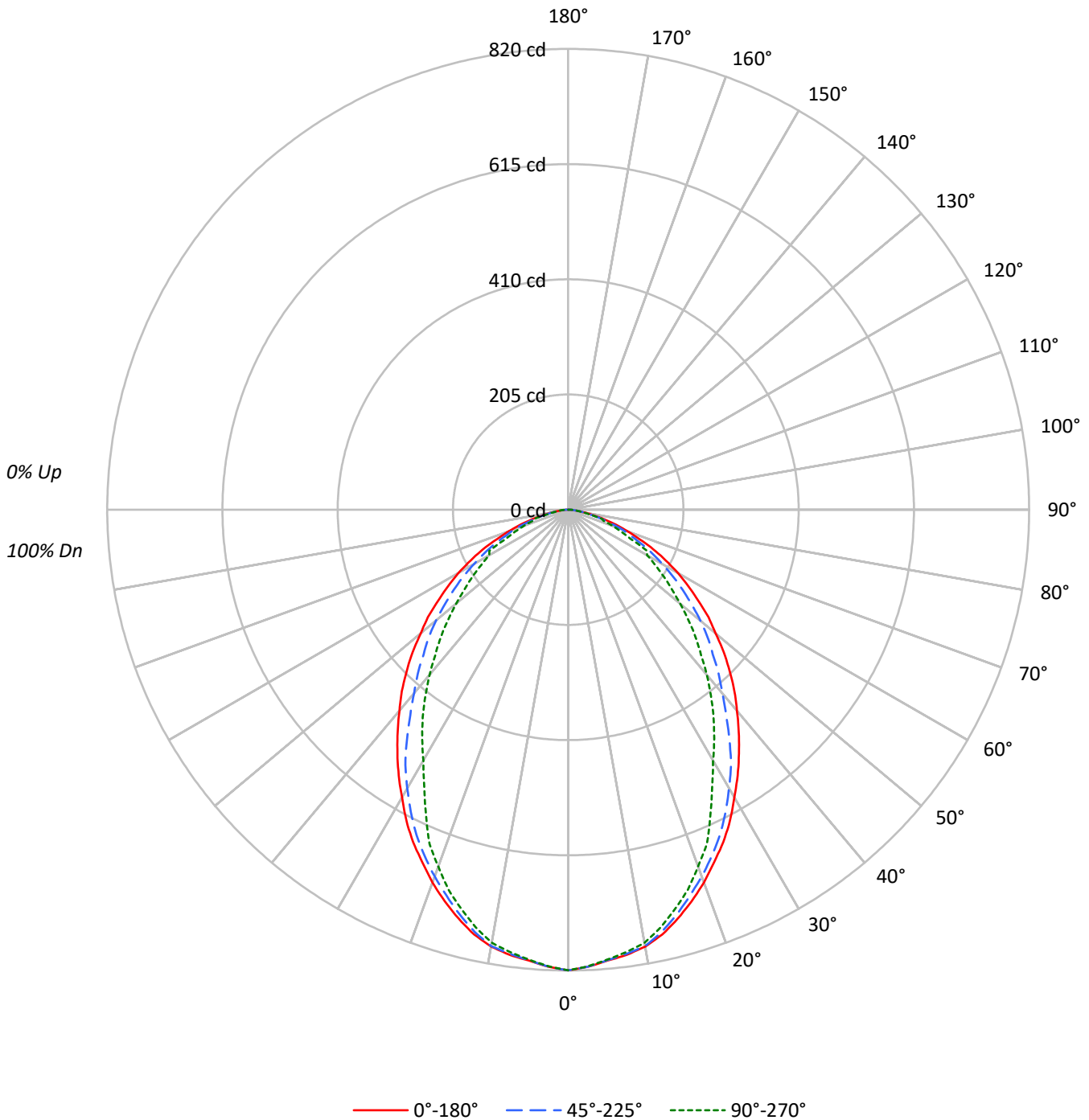
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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											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°	8822	8822	8822
5°	8702	8692	8682
10°	8627	8616	8554
15°	8394	8310	8194
20°	8086	7955	7739
25°	7753	7584	7112
30°	7349	7113	6406
35°	6960	6574	5926
40°	6563	5991	5391
45°	6188	5538	4876
50°	5729	5141	4347
55°	5300	4658	3894
60°	4855	4161	3488
65°	4271	3645	3089
70°	3519	3191	2625
75°	2799	2441	2562
80°	1878	1760	1643
85°	1173	1408	1643

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6188 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.3	4.7
10°-20°	209.4	13.0
20°-30°	289.9	18.0
30°-40°	309.1	19.2
40°-50°	282.0	17.5
50°-60°	220.9	13.7
60°-70°	144.0	8.9
70°-80°	63.8	4.0
80°-90°	13.7	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°	575.5	35.8
0°-40°	884.6	55.0
0°-60°	1387.5	86.2
0°-90°	1609.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1609.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	820	820	820	820	820	
5°	805	804	804	804	804	76
15°	753	753	746	738	735	212
25°	653	649	639	616	599	300
35°	530	526	500	462	451	331
45°	406	398	364	334	320	313
55°	282	274	248	219	208	253
65°	168	158	143	146	121	165
75°	67	62	59	56	62	72
85°	10	10	11	12	13	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	819.6	819.6	819.6	819.6	819.6
2.5°	813.9	813.9	813.9	813.0	813.0
5°	805.4	804.4	804.4	803.5	803.5
7.5°	798.8	797.8	796.9	795.9	794.0
10°	789.3	789.3	788.3	783.6	782.6
12.5°	774.1	773.2	769.4	762.8	760.9
15°	753.3	753.3	745.7	738.1	735.3
17.5°	730.5	729.6	720.1	712.5	708.7
20°	705.9	704.0	694.5	682.2	675.6
22.5°	678.4	678.4	667.1	650.9	644.3
25°	652.8	649.0	638.6	615.9	598.8
27.5°	623.5	617.8	606.4	574.2	554.3
30°	591.3	588.4	572.3	530.6	515.4
32.5°	560.9	556.2	539.1	495.6	483.2
35°	529.7	525.9	500.3	462.4	451.0
37.5°	498.4	493.7	461.4	431.1	416.9
40°	467.1	461.4	426.4	398.9	383.7
42.5°	437.8	430.2	396.1	366.7	349.6
45°	406.5	398.0	363.8	333.5	320.3
47.5°	375.2	367.6	336.4	305.1	289.9
50°	342.1	335.4	307.0	275.7	259.6
52.5°	314.6	304.2	276.7	245.4	232.1
55°	282.4	273.8	248.2	218.9	207.5
57.5°	253.0	244.5	220.8	193.3	183.8
60°	225.5	213.2	193.3	169.6	162.0
62.5°	195.2	185.7	168.7	148.8	158.2
65°	167.7	158.2	143.1	145.9	121.3
67.5°	137.4	132.7	119.4	106.1	102.3
70°	111.8	106.1	101.4	87.2	83.4
72.5°	89.1	83.4	76.7	69.2	66.3
75°	67.3	62.5	58.7	55.9	61.6
77.5°	46.4	44.5	41.7	38.8	37.9
80°	30.3	29.4	28.4	27.5	26.5
82.5°	18.0	18.0	18.0	18.0	18.0
85°	9.5	10.4	11.4	12.3	13.3
87.5°	5.7	5.7	6.6	7.6	8.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)