

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: P559194

Luminaire Tested: FSR-12-1-LD4-2HI-50-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559194
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-50-UNV-82-94-EDD-90
Description: 1X1 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1608.0 lumens
Efficiency: N/A
Efficacy: 74.4 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

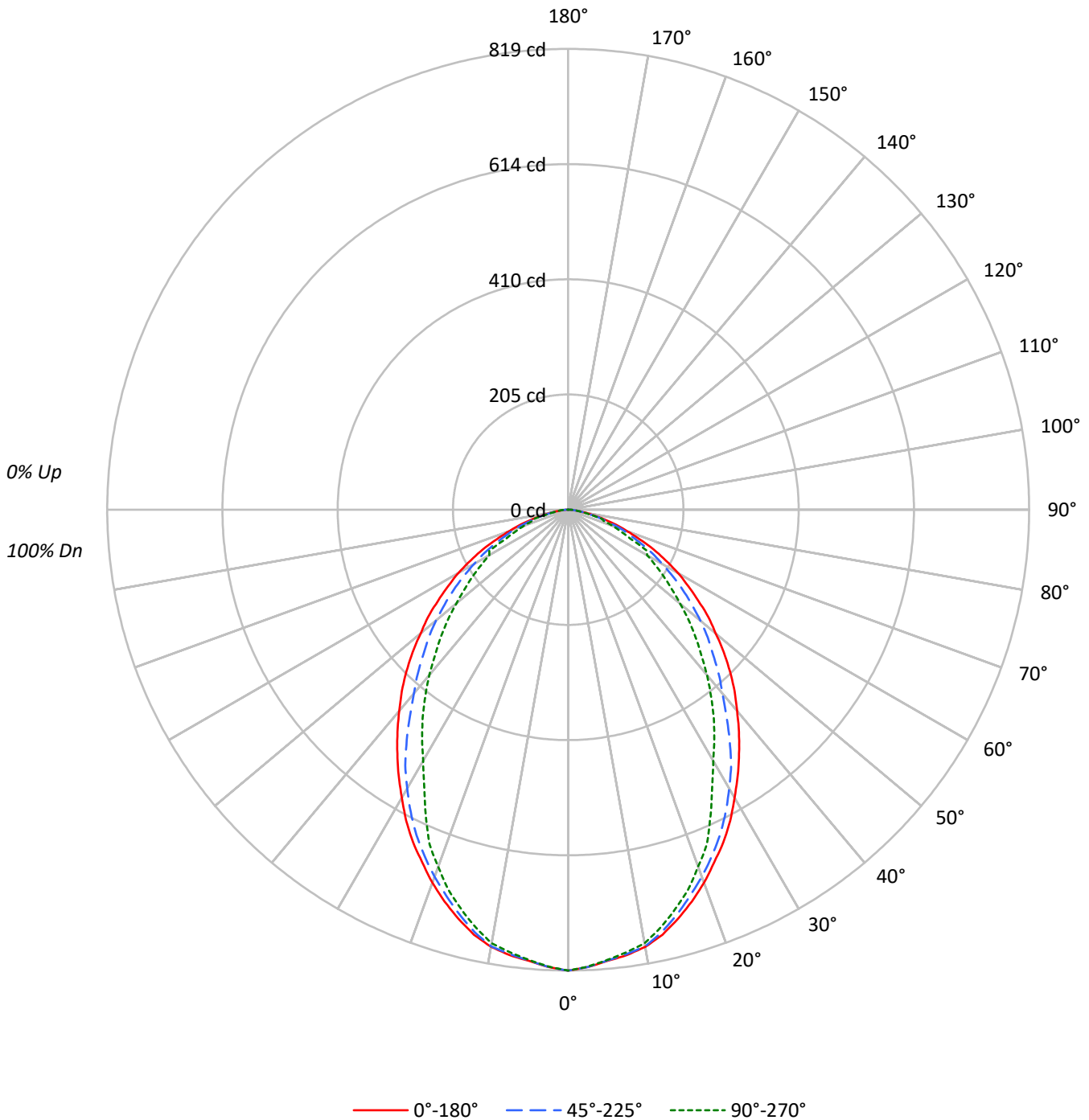
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8817	8817	8817
5°	8697	8686	8676
10°	8622	8611	8549
15°	8389	8304	8188
20°	8081	7951	7734
25°	7748	7580	7108
30°	7344	7108	6402
35°	6955	6570	5922
40°	6559	5987	5389
45°	6183	5535	4873
50°	5724	5138	4346
55°	5296	4656	3892
60°	4852	4159	3485
65°	4269	3642	3087
70°	3515	3188	2622
75°	2795	2441	2562
80°	1878	1760	1643
85°	1173	1408	1643

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6183 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.2	4.7
10°-20°	209.3	13.0
20°-30°	289.7	18.0
30°-40°	308.9	19.2
40°-50°	281.8	17.5
50°-60°	220.8	13.7
60°-70°	143.9	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°	575.2	35.8
0°-40°	884.1	55.0
0°-60°	1386.7	86.2
0°-90°	1608.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1608.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	819	819	819	819	819	
5°	805	804	804	803	803	76
15°	753	753	745	738	735	212
25°	652	649	638	616	598	300
35°	529	526	500	462	451	331
45°	406	398	364	333	320	313
55°	282	274	248	219	207	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°	<i>819.1</i>	<i>819.1</i>	<i>819.1</i>	<i>819.1</i>	<i>819.1</i>
2.5°	<i>813.4</i>	813.4	813.4	812.5	812.5
5°	<i>804.9</i>	803.9	803.9	803.0	803.0
7.5°	<i>798.3</i>	797.3	796.4	795.4	793.5
10°	<i>788.8</i>	788.8	787.8	783.1	782.2
12.5°	<i>773.6</i>	772.7	768.9	762.3	760.4
15°	<i>752.8</i>	752.8	745.2	737.7	734.8
17.5°	<i>730.1</i>	729.1	719.7	712.1	708.3
20°	<i>705.5</i>	703.6	694.1	681.8	675.2
22.5°	<i>678.0</i>	678.0	666.6	650.5	643.9
25°	<i>652.4</i>	648.6	638.2	615.5	598.5
27.5°	<i>623.1</i>	617.4	606.0	573.8	554.0
30°	<i>590.9</i>	588.0	571.9	530.3	515.1
32.5°	<i>560.6</i>	555.8	538.8	495.2	482.9
35°	<i>529.3</i>	525.5	500.0	462.1	450.7
37.5°	<i>498.1</i>	493.4	461.2	430.9	416.6
40°	<i>466.8</i>	461.2	426.1	398.7	383.5
42.5°	<i>437.5</i>	429.9	395.8	366.5	349.4
45°	<i>406.2</i>	397.7	363.6	333.3	320.1
47.5°	<i>375.0</i>	367.4	336.2	304.9	289.8
50°	<i>341.8</i>	335.2	306.8	275.6	259.5
52.5°	<i>314.4</i>	304.0	276.5	245.3	232.0
55°	<i>282.2</i>	273.7	248.1	218.7	207.4
57.5°	<i>252.8</i>	244.3	220.6	193.2	183.7
60°	<i>225.4</i>	213.1	193.2	169.5	161.9
62.5°	<i>195.1</i>	185.6	168.6	148.7	158.1
65°	<i>167.6</i>	158.1	143.0	145.8	121.2
67.5°	<i>137.3</i>	132.6	119.3	106.1	102.3
70°	<i>111.7</i>	106.1	101.3	87.1	83.3
72.5°	<i>89.0</i>	83.3	76.7	69.1	66.3
75°	<i>67.2</i>	62.5	58.7	55.9	61.6
77.5°	<i>46.4</i>	44.5	41.7	38.8	37.9
80°	<i>30.3</i>	29.4	28.4	27.5	26.5
82.5°	<i>18.0</i>	18.0	18.0	18.0	18.0
85°	<i>9.5</i>	10.4	11.4	12.3	13.3
87.5°	<i>5.7</i>	5.7	6.6	7.6	8.5
90°	<i>0.0</i>	0.0	0.0	0.0	0.0

(END OF REPORT)