

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: P559177

Luminaire Tested: FSR-12-1-LD4-2HI-50-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559177
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-81-88-EDD
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1590.0 lumens
Efficiency: N/A
Efficacy: 73.6 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

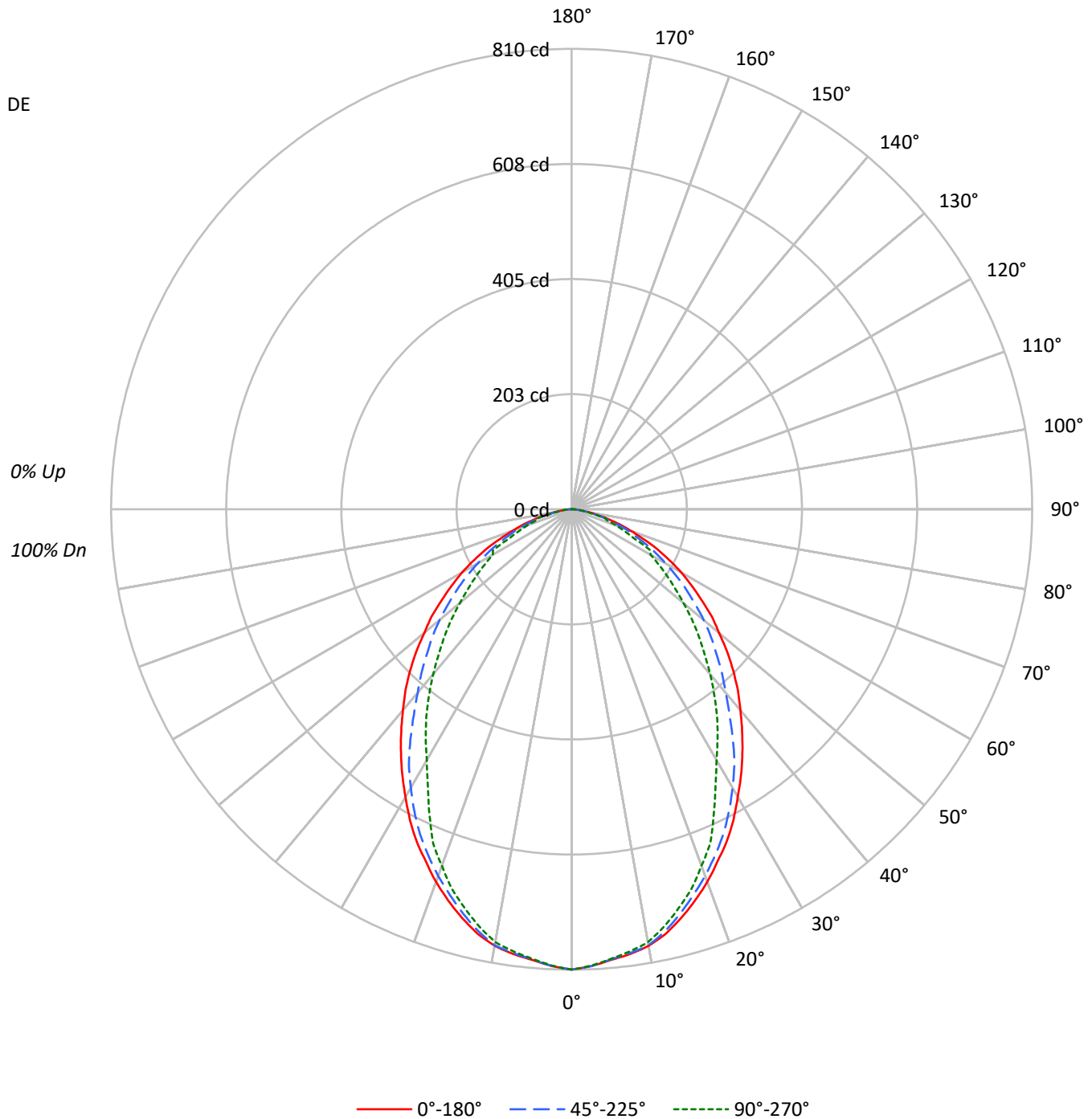
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8718	8718	8718
5°	8600	8589	8579
10°	8525	8514	8453
15°	8295	8212	8097
20°	7991	7861	7647
25°	7662	7495	7029
30°	7262	7029	6331
35°	6878	6497	5857
40°	6486	5920	5328
45°	6115	5474	4818
50°	5660	5081	4297
55°	5236	4603	3849
60°	4796	4112	3447
65°	4220	3601	3054
70°	3478	3153	2593
75°	2766	2416	2533
80°	1860	1742	1624
85°	1161	1383	1618

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6115 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.4	4.7
10°-20°	206.9	13.0
20°-30°	286.5	18.0
30°-40°	305.4	19.2
40°-50°	278.7	17.5
50°-60°	218.3	13.7
60°-70°	142.3	8.9
70°-80°	63.0	4.0
80°-90°	13.5	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°	568.8	35.8
0°-40°	874.2	55.0
0°-60°	1371.2	86.2
0°-90°	1590.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1590.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	810	810	810	810	810	
5°	796	795	795	794	794	76
15°	744	744	737	729	727	209
25°	645	641	631	609	592	296
35°	523	520	494	457	446	327
45°	402	393	360	330	316	309
55°	279	271	245	216	205	250
65°	166	156	141	144	120	163
75°	66	62	58	55	61	71
85°	9	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°	809.9	809.9	809.9	809.9	809.9
2.5°	804.3	804.3	804.3	803.4	803.4
5°	795.9	794.9	794.9	794.0	794.0
7.5°	789.3	788.4	787.5	786.5	784.6
10°	780.0	780.0	779.0	774.3	773.4
12.5°	765.0	764.0	760.3	753.7	751.9
15°	744.4	744.4	736.9	729.4	726.6
17.5°	721.9	721.0	711.6	704.1	700.4
20°	697.6	695.7	686.3	674.2	667.6
22.5°	670.4	670.4	659.2	643.3	636.7
25°	645.1	641.4	631.1	608.6	591.8
27.5°	616.1	610.5	599.3	567.4	547.8
30°	584.3	581.5	565.5	524.3	509.4
32.5°	554.3	549.6	532.8	489.7	477.5
35°	523.4	519.7	494.4	456.9	445.7
37.5°	492.5	487.8	456.0	426.0	412.0
40°	461.6	456.0	421.3	394.2	379.2
42.5°	432.6	425.1	391.4	362.4	345.5
45°	401.7	393.3	359.6	329.6	316.5
47.5°	370.8	363.3	332.4	301.5	286.5
50°	338.0	331.5	303.4	272.5	256.6
52.5°	310.9	300.6	273.4	242.5	229.4
55°	279.0	270.6	245.3	216.3	205.1
57.5°	250.0	241.6	218.2	191.0	181.6
60°	222.8	210.7	191.0	167.6	160.1
62.5°	192.9	183.5	166.7	147.0	156.4
65°	165.7	156.4	141.4	144.2	119.9
67.5°	135.8	131.1	118.0	104.9	101.1
70°	110.5	104.9	100.2	86.1	82.4
72.5°	88.0	82.4	75.8	68.4	65.5
75°	66.5	61.8	58.1	55.2	60.9
77.5°	45.9	44.0	41.2	38.4	37.5
80°	30.0	29.0	28.1	27.2	26.2
82.5°	17.8	17.8	17.8	17.8	17.8
85°	9.4	10.3	11.2	12.2	13.1
87.5°	5.6	5.6	6.6	7.5	8.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)