

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: P559500

Luminaire Tested: FSR-12-1-LD4-2STD-40-UNV-81-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559500
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-LD4-2STD-40-UNV-81-96-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1258.0 lumens
Efficiency: N/A
Efficacy: 75.8 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

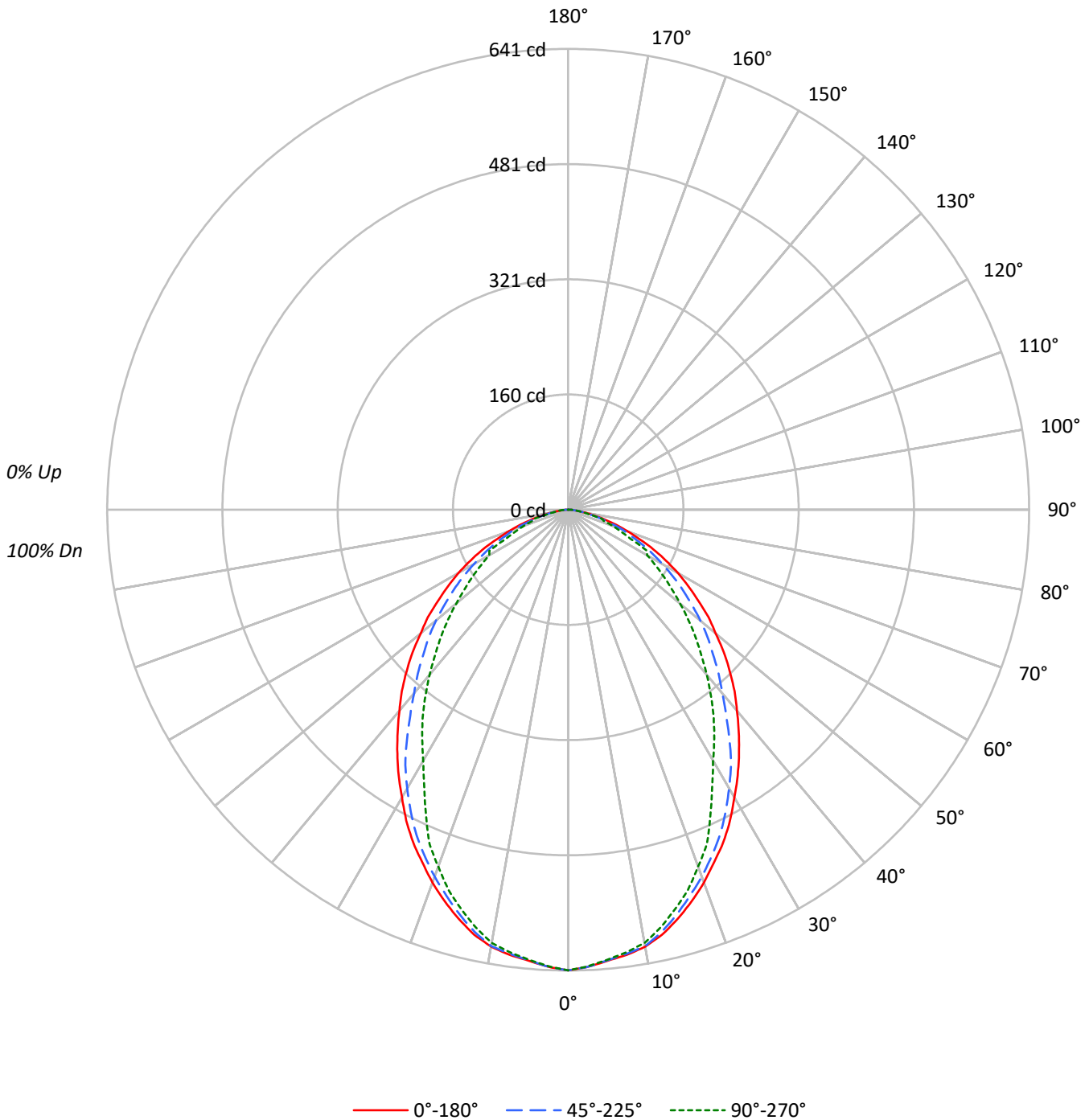
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6898	6898	6898
5°	6804	6796	6788
10°	6745	6737	6688
15°	6564	6497	6406
20°	6322	6220	6050
25°	6062	5930	5561
30°	5746	5562	5009
35°	5441	5140	4633
40°	5132	4685	4215
45°	4838	4331	3812
50°	4478	4019	3399
55°	4144	3643	3044
60°	3795	3253	2728
65°	3339	2850	2415
70°	2751	2496	2052
75°	2188	1909	2005
80°	1469	1376	1283
85°	914	1099	1284

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4838 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.7	4.7
10°-20°	163.7	13.0
20°-30°	226.6	18.0
30°-40°	241.7	19.2
40°-50°	220.5	17.5
50°-60°	172.7	13.7
60°-70°	112.6	8.9
70°-80°	49.9	4.0
80°-90°	10.7	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°	450.0	35.8
0°-40°	691.7	55.0
0°-60°	1084.8	86.2
0°-90°	1258.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1258.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	641	641	641	641	641	
5°	630	629	629	628	628	60
15°	589	589	583	577	575	166
25°	510	508	499	482	468	234
35°	414	411	391	362	353	259
45°	318	311	284	261	250	245
55°	221	214	194	171	162	198
65°	131	124	112	114	95	129
75°	53	49	46	44	48	56
85°	7	8	9	10	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	640.8	640.8	640.8	640.8	640.8
2.5°	636.4	636.4	636.4	635.6	635.6
5°	629.7	629.0	629.0	628.2	628.2
7.5°	624.5	623.8	623.0	622.3	620.8
10°	617.1	617.1	616.4	612.7	611.9
12.5°	605.2	604.5	601.5	596.4	594.9
15°	589.0	589.0	583.0	577.1	574.9
17.5°	571.2	570.4	563.0	557.1	554.1
20°	551.9	550.4	543.0	533.4	528.2
22.5°	530.4	530.4	521.5	508.9	503.8
25°	510.4	507.5	499.3	481.5	468.2
27.5°	487.5	483.0	474.1	448.9	433.4
30°	462.3	460.0	447.5	414.9	403.0
32.5°	438.6	434.9	421.5	387.4	377.8
35°	414.1	411.2	391.2	361.5	352.6
37.5°	389.7	386.0	360.8	337.1	326.0
40°	365.2	360.8	333.4	311.9	300.0
42.5°	342.3	336.3	309.7	286.7	273.4
45°	317.8	311.1	284.5	260.8	250.4
47.5°	293.4	287.4	263.0	238.5	226.7
50°	267.4	262.2	240.0	215.6	203.0
52.5°	246.0	237.8	216.3	191.9	181.5
55°	220.8	214.1	194.1	171.1	162.2
57.5°	197.8	191.1	172.6	151.1	143.7
60°	176.3	166.7	151.1	132.6	126.7
62.5°	152.6	145.2	131.9	116.3	123.7
65°	131.1	123.7	111.9	114.1	94.8
67.5°	107.4	103.7	93.3	83.0	80.0
70°	87.4	83.0	79.3	68.2	65.2
72.5°	69.6	65.2	60.0	54.1	51.9
75°	52.6	48.9	45.9	43.7	48.2
77.5°	36.3	34.8	32.6	30.4	29.6
80°	23.7	23.0	22.2	21.5	20.7
82.5°	14.1	14.1	14.1	14.1	14.1
85°	7.4	8.1	8.9	9.6	10.4
87.5°	4.4	4.4	5.2	5.9	6.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)