

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: P559450

Luminaire Tested: FSR-12-1-LD4-2STD-35-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559450
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1227.0 lumens
Efficiency: N/A
Efficacy: 73.9 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

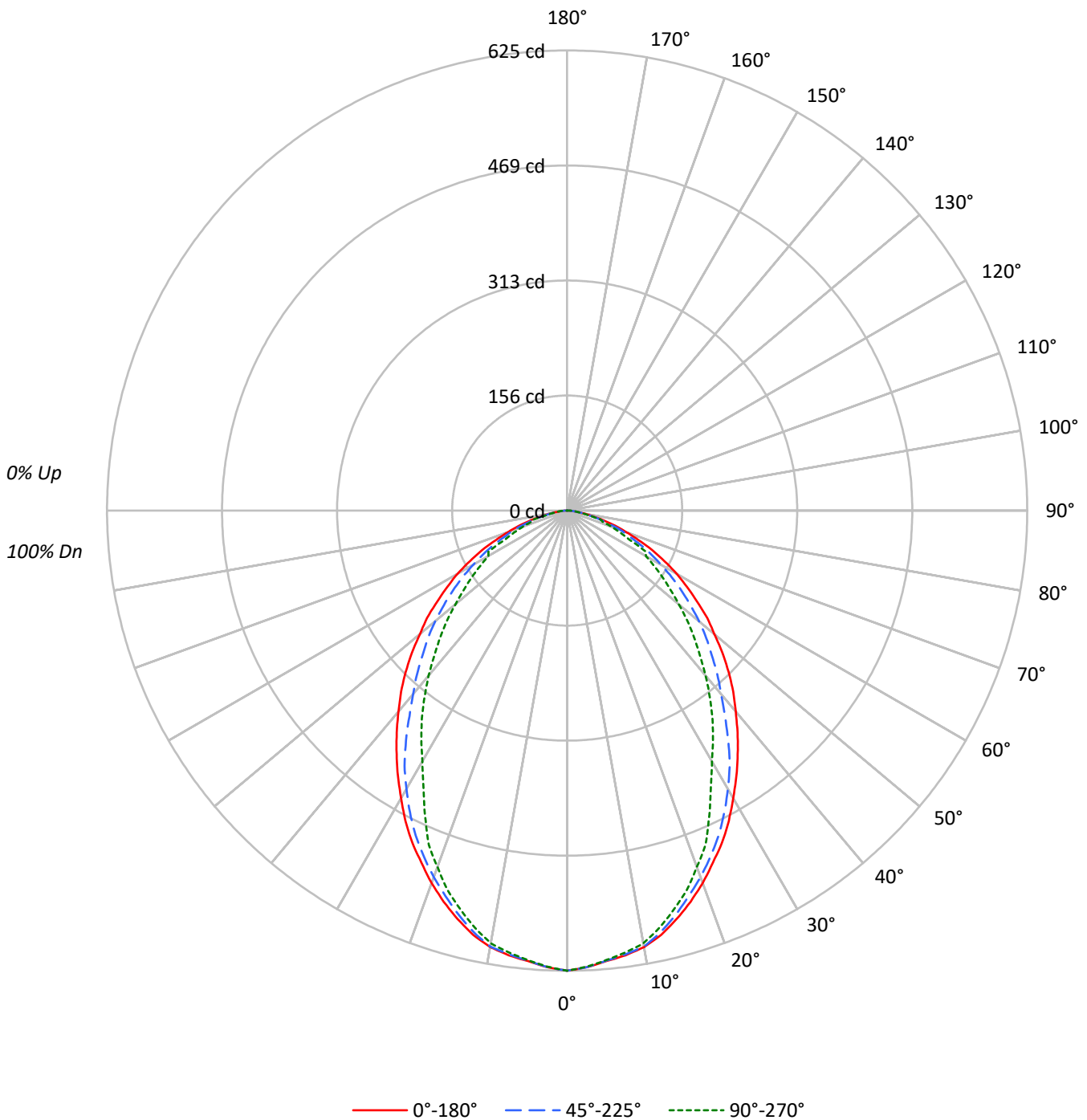
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
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°	6727	6727	6727
5°	6636	6629	6620
10°	6579	6571	6523
15°	6401	6337	6248
20°	6166	6066	5901
25°	5912	5784	5424
30°	5604	5424	4886
35°	5307	5013	4519
40°	5005	4569	4111
45°	4719	4224	3717
50°	4367	3920	3316
55°	4040	3552	2969
60°	3703	3173	2661
65°	3258	2779	2356
70°	2685	2433	2002
75°	2133	1863	1955
80°	1432	1345	1252
85°	889	1074	1247

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4719 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.2	4.7
10°-20°	159.7	13.0
20°-30°	221.1	18.0
30°-40°	235.7	19.2
40°-50°	215.0	17.5
50°-60°	168.5	13.7
60°-70°	109.8	8.9
70°-80°	48.6	4.0
80°-90°	10.4	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°	438.9	35.8
0°-40°	674.6	55.0
0°-60°	1058.1	86.2
0°-90°	1227.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1227.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	625	625	625	625	625	
5°	614	614	614	613	613	58
15°	574	574	569	563	561	161
25°	498	495	487	470	457	229
35°	404	401	382	353	344	253
45°	310	304	278	254	244	239
55°	215	209	189	167	158	193
65°	128	121	109	111	92	126
75°	51	48	45	43	47	55
85°	7	8	9	9	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	625.0	625.0	625.0	625.0	625.0
2.5°	620.7	620.7	620.7	620.0	620.0
5°	614.2	613.5	613.5	612.7	612.7
7.5°	609.1	608.4	607.7	607.0	605.5
10°	601.9	601.9	601.2	597.6	596.8
12.5°	590.3	589.6	586.7	581.7	580.2
15°	574.4	574.4	568.7	562.9	560.7
17.5°	557.1	556.4	549.1	543.4	540.5
20°	538.3	536.9	529.6	520.2	515.2
22.5°	517.4	517.4	508.7	496.4	491.3
25°	497.8	495.0	487.0	469.7	456.7
27.5°	475.4	471.1	462.4	437.9	422.7
30°	450.9	448.7	436.4	404.6	393.1
32.5°	427.8	424.1	411.1	377.9	368.5
35°	403.9	401.0	381.5	352.6	343.9
37.5°	380.1	376.5	351.9	328.8	317.9
40°	356.2	351.9	325.2	304.2	292.6
42.5°	333.8	328.0	302.0	279.6	266.6
45°	310.0	303.5	277.5	254.3	244.2
47.5°	286.1	280.4	256.5	232.7	221.1
50°	260.8	255.8	234.1	210.3	198.0
52.5°	239.9	231.9	211.0	187.1	177.0
55°	215.3	208.8	189.3	166.9	158.2
57.5°	192.9	186.4	168.4	147.4	140.2
60°	172.0	162.6	147.4	129.3	123.6
62.5°	148.8	141.6	128.6	113.4	120.7
65°	127.9	120.7	109.1	111.3	92.5
67.5°	104.8	101.2	91.0	80.9	78.0
70°	85.3	80.9	77.3	66.5	63.6
72.5°	67.9	63.6	58.5	52.7	50.6
75°	51.3	47.7	44.8	42.6	47.0
77.5°	35.4	34.0	31.8	29.6	28.9
80°	23.1	22.4	21.7	21.0	20.2
82.5°	13.7	13.7	13.7	13.7	13.7
85°	7.2	7.9	8.7	9.4	10.1
87.5°	4.3	4.3	5.1	5.8	6.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)