

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: P559462

Luminaire Tested: FSR-12-1-LD4-2STD-35-UNV-93-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P559462
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-93-87-EDD-90
Description: 1X1 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1237.0 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

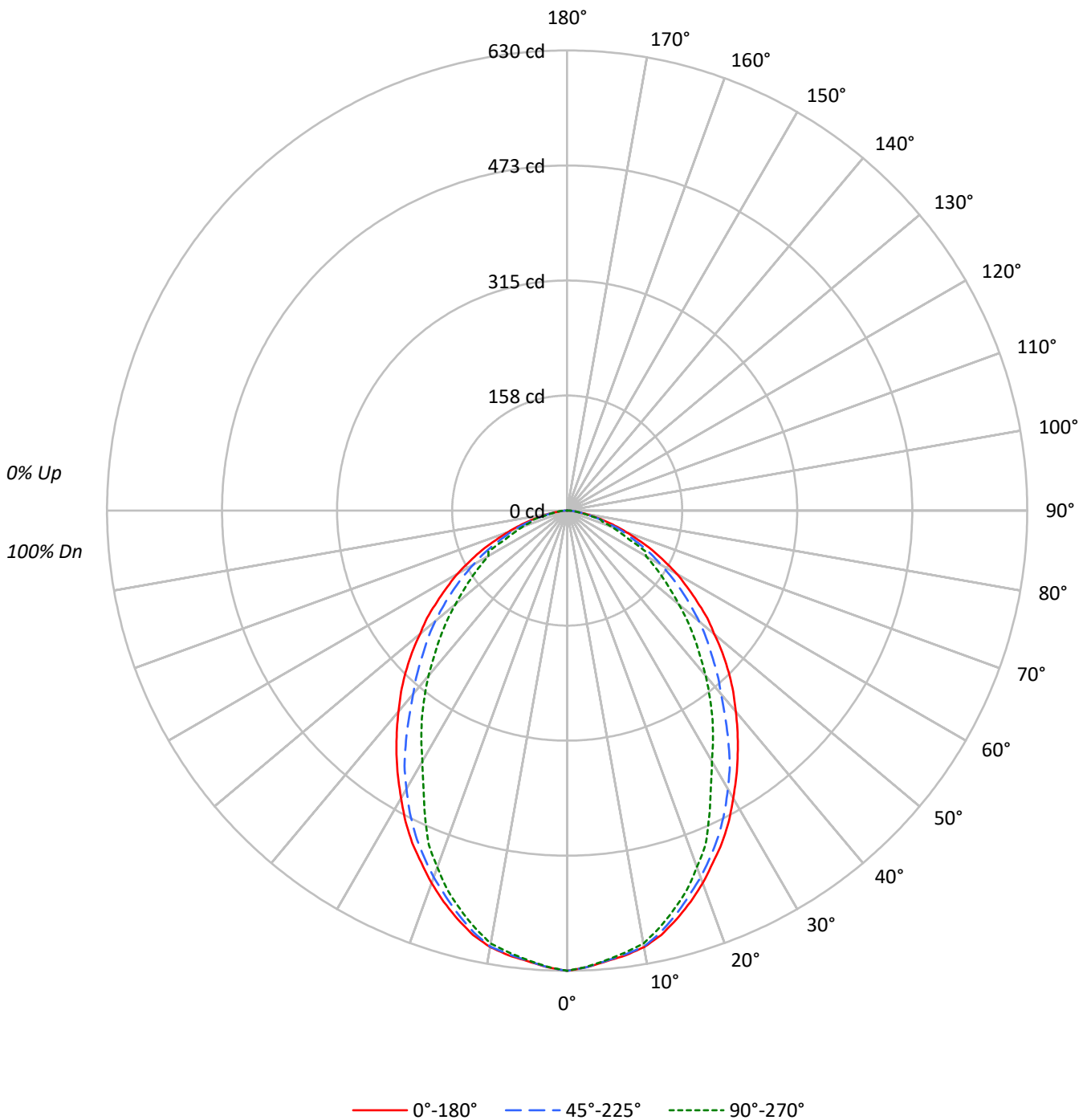
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6782	6782	6782
5°	6690	6683	6674
10°	6632	6625	6577
15°	6453	6389	6299
20°	6216	6117	5950
25°	5961	5831	5468
30°	5650	5469	4926
35°	5351	5054	4556
40°	5046	4606	4145
45°	4757	4258	3748
50°	4404	3952	3342
55°	4074	3582	2993
60°	3733	3199	2682
65°	3283	2802	2374
70°	2707	2452	2017
75°	2150	1880	1967
80°	1444	1358	1265
85°	902	1074	1260

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4757 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.7	4.7
10°-20°	161.0	13.0
20°-30°	222.9	18.0
30°-40°	237.6	19.2
40°-50°	216.8	17.5
50°-60°	169.8	13.7
60°-70°	110.7	8.9
70°-80°	49.0	4.0
80°-90°	10.5	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°	442.5	35.8
0°-40°	680.1	55.0
0°-60°	1066.7	86.2
0°-90°	1237.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1237.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	630	630	630	630	630	
5°	619	618	618	618	618	59
15°	579	579	573	568	565	163
25°	502	499	491	474	460	230
35°	407	404	385	356	347	255
45°	312	306	280	256	246	241
55°	217	210	191	168	160	195
65°	129	122	110	112	93	127
75°	52	48	45	43	47	55
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°	630.1	630.1	630.1	630.1	630.1
2.5°	625.7	625.7	625.7	625.0	625.0
5°	619.2	618.5	618.5	617.7	617.7
7.5°	614.1	613.4	612.6	611.9	610.4
10°	606.8	606.8	606.1	602.4	601.7
12.5°	595.1	594.4	591.5	586.4	584.9
15°	579.1	579.1	573.3	567.5	565.3
17.5°	561.6	560.9	553.6	547.8	544.9
20°	542.7	541.2	534.0	524.5	519.4
22.5°	521.6	521.6	512.8	500.4	495.3
25°	501.9	499.0	491.0	473.5	460.4
27.5°	479.3	475.0	466.2	441.4	426.1
30°	454.6	452.4	440.0	407.9	396.3
32.5°	431.2	427.6	414.5	381.0	371.5
35°	407.2	404.3	384.6	355.5	346.7
37.5°	383.2	379.5	354.8	331.4	320.5
40°	359.1	354.8	327.8	306.7	295.0
42.5°	336.5	330.7	304.5	281.9	268.8
45°	312.5	305.9	279.7	256.4	246.2
47.5°	288.5	282.6	258.6	234.6	222.9
50°	263.0	257.9	236.0	212.0	199.6
52.5°	241.8	233.8	212.7	188.7	178.5
55°	217.1	210.5	190.9	168.3	159.5
57.5°	194.5	187.9	169.7	148.6	141.3
60°	173.4	163.9	148.6	130.4	124.6
62.5°	150.1	142.8	129.7	114.4	121.7
65°	128.9	121.7	110.0	112.2	93.2
67.5°	105.6	102.0	91.8	81.6	78.7
70°	86.0	81.6	77.9	67.0	64.1
72.5°	68.5	64.1	59.0	53.2	51.0
75°	51.7	48.1	45.2	43.0	47.3
77.5°	35.7	34.2	32.1	29.9	29.1
80°	23.3	22.6	21.9	21.1	20.4
82.5°	13.8	13.8	13.8	13.8	13.8
85°	7.3	8.0	8.7	9.5	10.2
87.5°	4.4	4.4	5.1	5.8	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)