

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: P560167

Luminaire Tested: FSR-12-2-LD4-1STD-50-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560167
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-12-2-LD4-1STD-50-UNV-93-87-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1472.0 lumens
Efficiency: N/A
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

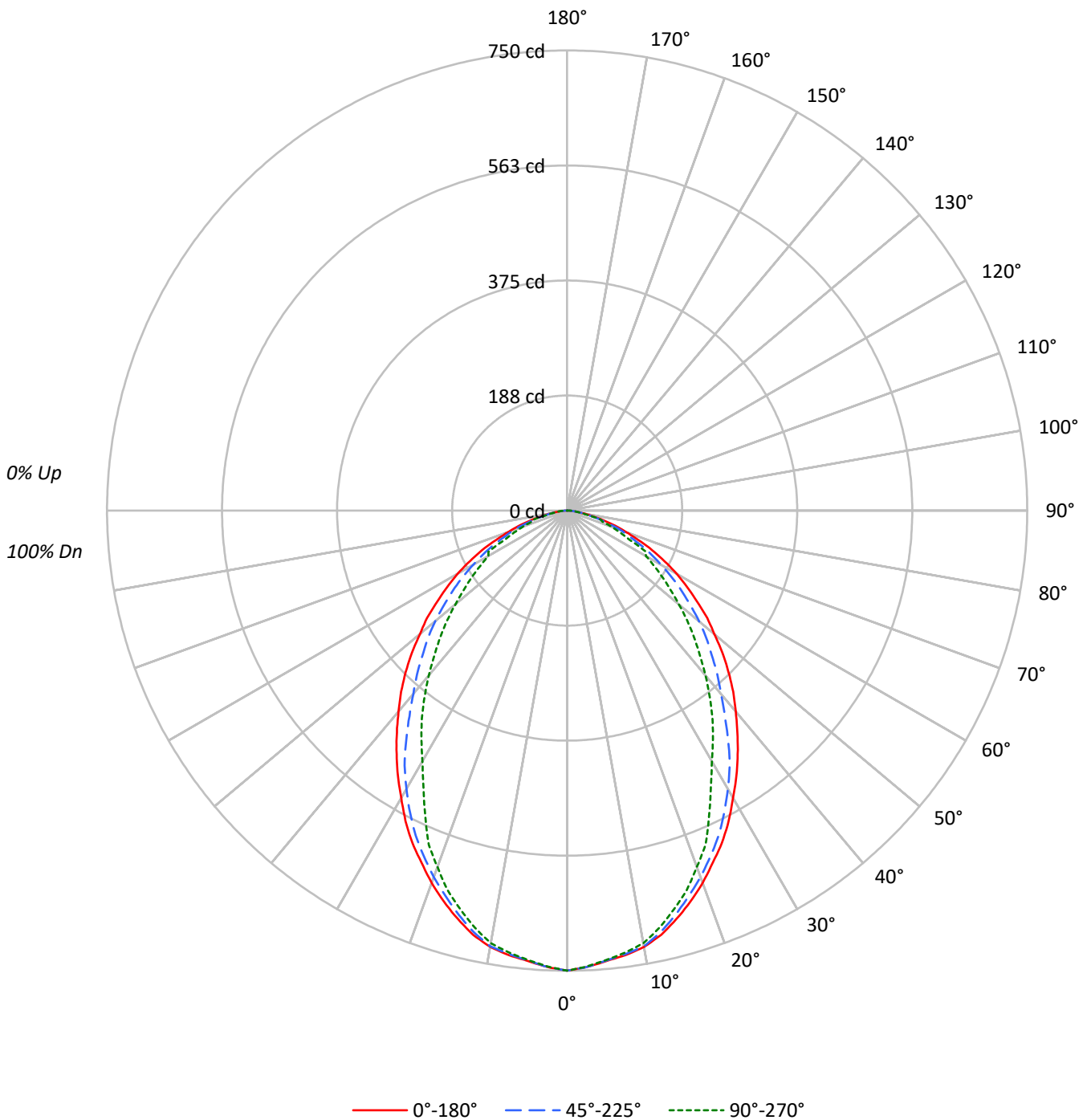
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4035	4035	4035
5°	3981	3976	3971
10°	3946	3941	3913
15°	3840	3801	3748
20°	3699	3639	3540
25°	3547	3470	3253
30°	3361	3254	2931
35°	3184	3007	2711
40°	3003	2741	2467
45°	2831	2534	2230
50°	2620	2352	1989
55°	2424	2131	1781
60°	2221	1903	1595
65°	1954	1667	1414
70°	1610	1460	1201
75°	1279	1117	1171
80°	859	806	753
85°	537	642	747

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2831 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.8	4.7
10°-20°	191.6	13.0
20°-30°	265.2	18.0
30°-40°	282.8	19.2
40°-50°	258.0	17.5
50°-60°	202.1	13.7
60°-70°	131.7	8.9
70°-80°	58.3	4.0
80°-90°	12.5	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°	526.6	35.8
0°-40°	809.3	55.0
0°-60°	1269.4	86.2
0°-90°	1472.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1472.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	750	750	750	750	750	
5°	737	736	736	735	735	70
15°	689	689	682	675	673	194
25°	597	594	584	563	548	274
35°	485	481	458	423	413	303
45°	372	364	333	305	293	286
55°	258	250	227	200	190	232
65°	153	145	131	134	111	151
75°	62	57	54	51	56	66
85°	9	10	10	11	12	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	749.8	749.8	749.8	749.8	749.8
2.5°	744.6	744.6	744.6	743.7	743.7
5°	736.8	735.9	735.9	735.1	735.1
7.5°	730.7	729.9	729.0	728.1	726.4
10°	722.1	722.1	721.2	716.9	716.0
12.5°	708.2	707.3	703.9	697.8	696.1
15°	689.1	689.1	682.2	675.3	672.7
17.5°	668.3	667.5	658.8	651.9	648.4
20°	645.8	644.1	635.4	624.1	618.1
22.5°	620.7	620.7	610.3	595.5	589.5
25°	597.3	593.8	584.3	563.4	547.8
27.5°	570.4	565.2	554.8	525.3	507.1
30°	540.9	538.3	523.6	485.4	471.6
32.5°	513.2	508.8	493.2	453.4	442.1
35°	484.6	481.1	457.7	423.0	412.6
37.5°	456.0	451.6	422.2	394.4	381.4
40°	427.4	422.2	390.1	364.9	351.1
42.5°	400.5	393.5	362.3	335.5	319.9
45°	371.9	364.1	332.9	305.1	293.0
47.5°	343.3	336.3	307.7	279.1	265.3
50°	312.9	306.9	280.9	252.3	237.5
52.5°	287.8	278.3	253.1	224.5	212.4
55°	258.3	250.5	227.1	200.2	189.8
57.5°	231.4	223.6	202.0	176.8	168.2
60°	206.3	195.0	176.8	155.2	148.2
62.5°	178.6	169.9	154.3	136.1	144.8
65°	153.4	144.8	130.9	133.5	111.0
67.5°	125.7	121.4	109.2	97.1	93.6
70°	102.3	97.1	92.8	79.7	76.3
72.5°	81.5	76.3	70.2	63.3	60.7
75°	61.5	57.2	53.7	51.1	56.3
77.5°	42.5	40.7	38.1	35.5	34.7
80°	27.7	26.9	26.0	25.1	24.3
82.5°	16.5	16.5	16.5	16.5	16.5
85°	8.7	9.5	10.4	11.3	12.1
87.5°	5.2	5.2	6.1	6.9	7.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)