

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: P560079

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-81-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560079
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-40-UNV-81-97-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1399.0 lumens
Efficiency: N/A
Efficacy: 84.3 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

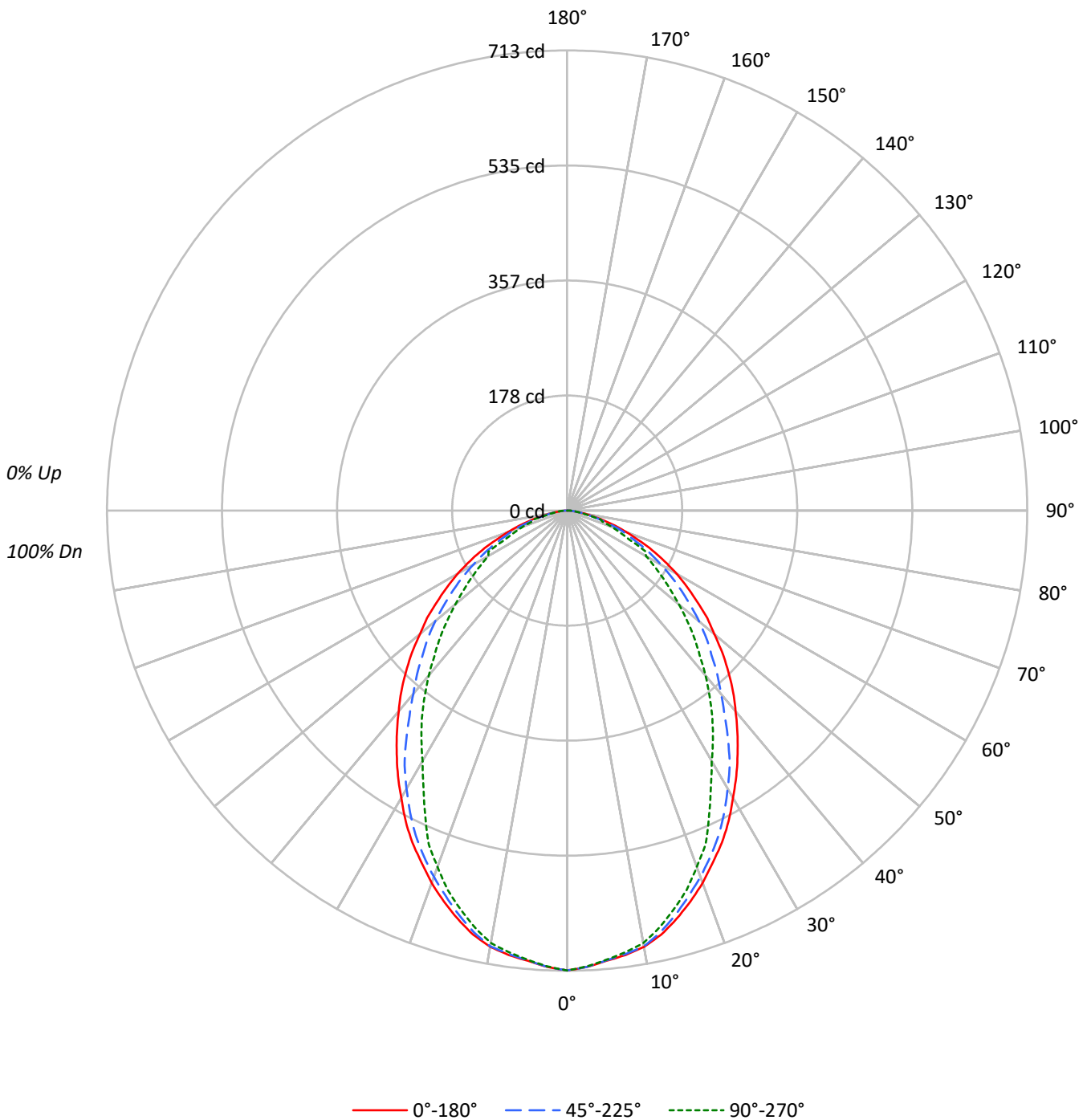
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3835	3835	3835
5°	3783	3779	3774
10°	3751	3746	3719
15°	3650	3613	3562
20°	3515	3459	3364
25°	3371	3298	3092
30°	3195	3092	2785
35°	3026	2858	2577
40°	2854	2604	2344
45°	2690	2408	2120
50°	2490	2235	1890
55°	2304	2025	1693
60°	2111	1809	1517
65°	1857	1584	1344
70°	1530	1388	1141
75°	1216	1063	1115
80°	818	766	716
85°	506	611	710

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2690 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	66.3	4.7
10°-20°	182.1	13.0
20°-30°	252.0	18.0
30°-40°	268.7	19.2
40°-50°	245.2	17.5
50°-60°	192.1	13.7
60°-70°	125.2	8.9
70°-80°	55.5	4.0
80°-90°	11.9	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°	500.4	35.8
0°-40°	769.2	55.0
0°-60°	1206.5	86.2
0°-90°	1399.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1399.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	713	713	713	713	713	
5°	700	700	700	699	699	66
15°	655	655	648	642	639	184
25°	568	564	555	536	521	261
35°	460	457	435	402	392	288
45°	353	346	316	290	278	272
55°	246	238	216	190	180	220
65°	146	138	124	127	106	144
75°	58	54	51	49	54	63
85°	8	9	10	11	12	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	712.6	712.6	712.6	712.6	712.6
2.5°	707.7	707.7	707.7	706.9	706.9
5°	700.3	699.5	699.5	698.6	698.6
7.5°	694.5	693.7	692.9	692.0	690.4
10°	686.3	686.3	685.4	681.3	680.5
12.5°	673.1	672.3	669.0	663.2	661.6
15°	655.0	655.0	648.4	641.8	639.3
17.5°	635.2	634.4	626.1	619.5	616.2
20°	613.8	612.1	603.9	593.2	587.4
22.5°	589.9	589.9	580.0	566.0	560.2
25°	567.6	564.3	555.3	535.5	520.7
27.5°	542.1	537.2	527.3	499.3	482.0
30°	514.1	511.6	497.6	461.4	448.2
32.5°	487.7	483.6	468.8	430.9	420.2
35°	460.5	457.2	435.0	402.0	392.2
37.5°	433.3	429.2	401.2	374.9	362.5
40°	406.2	401.2	370.7	346.8	333.7
42.5°	380.6	374.0	344.4	318.8	304.0
45°	353.4	346.0	316.4	290.0	278.5
47.5°	326.2	319.7	292.5	265.3	252.1
50°	297.4	291.6	266.9	239.7	225.7
52.5°	273.5	264.5	240.6	213.4	201.8
55°	245.5	238.1	215.8	190.3	180.4
57.5°	220.0	212.6	192.0	168.1	159.8
60°	196.1	185.4	168.1	147.5	140.9
62.5°	169.7	161.5	146.6	129.3	137.6
65°	145.8	137.6	124.4	126.9	105.5
67.5°	119.5	115.3	103.8	92.3	89.0
70°	97.2	92.3	88.2	75.8	72.5
72.5°	77.4	72.5	66.7	60.1	57.7
75°	58.5	54.4	51.1	48.6	53.6
77.5°	40.4	38.7	36.2	33.8	33.0
80°	26.4	25.5	24.7	23.9	23.1
82.5°	15.7	15.7	15.7	15.7	15.7
85°	8.2	9.1	9.9	10.7	11.5
87.5°	4.9	4.9	5.8	6.6	7.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)