

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: P560091

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560091
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-82-94-EDD
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 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: 1436.0 lumens
Efficiency: N/A
Efficacy: 86.5 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

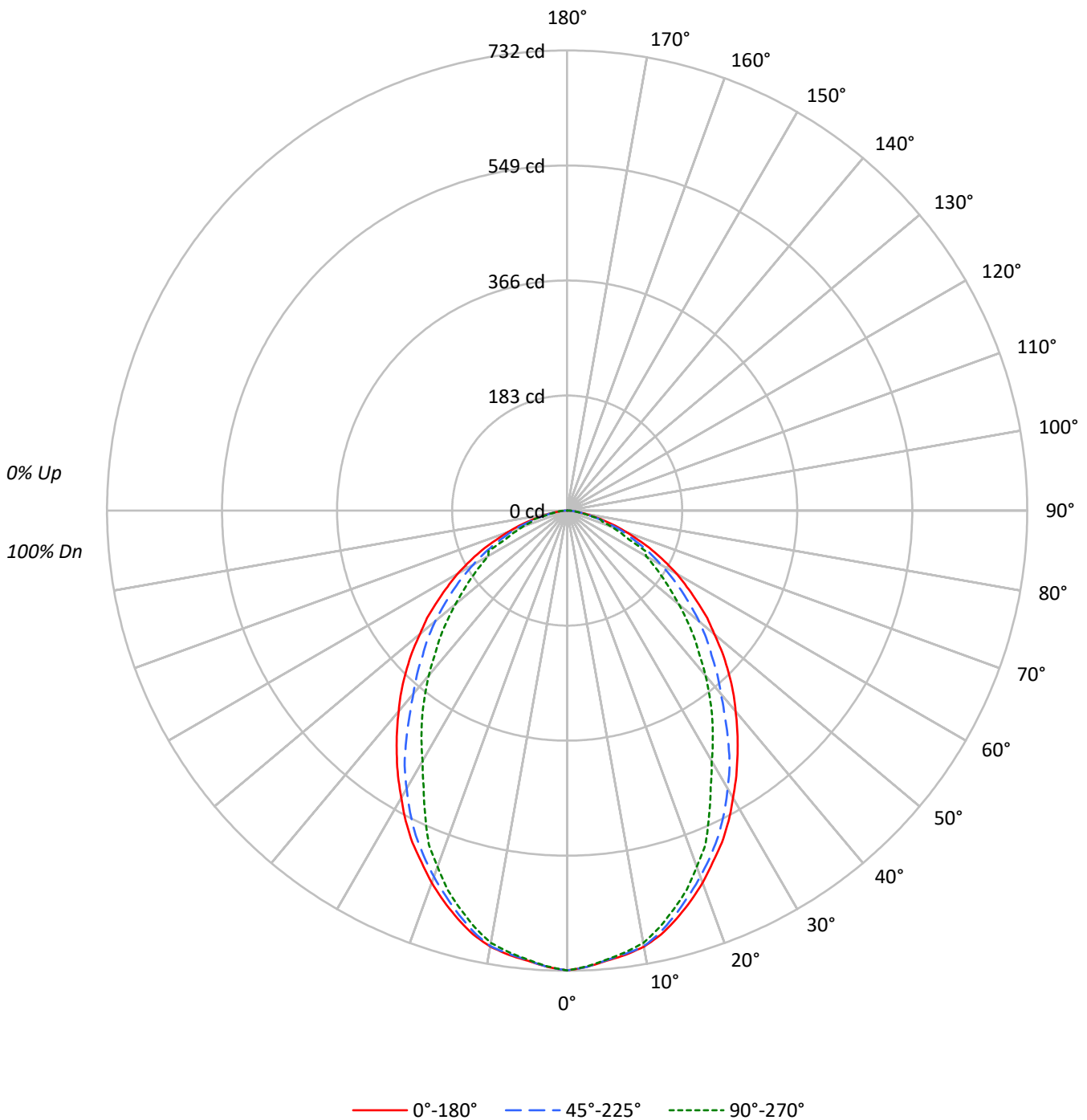
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3937	3937	3937
5°	3883	3878	3874
10°	3850	3845	3817
15°	3746	3708	3656
20°	3608	3550	3453
25°	3460	3385	3173
30°	3279	3174	2859
35°	3106	2934	2644
40°	2929	2673	2406
45°	2761	2471	2175
50°	2556	2294	1940
55°	2365	2079	1738
60°	2167	1857	1556
65°	1906	1626	1378
70°	1570	1424	1171
75°	1248	1090	1144
80°	840	787	735
85°	525	624	729

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2761 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.1	4.7
10°-20°	186.9	13.0
20°-30°	258.7	18.0
30°-40°	275.9	19.2
40°-50°	251.7	17.5
50°-60°	197.2	13.7
60°-70°	128.5	8.9
70°-80°	56.9	4.0
80°-90°	12.2	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°	513.7	35.8
0°-40°	789.5	55.0
0°-60°	1238.4	86.2
0°-90°	1436.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1436.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	732	732	732	732	732	
5°	719	718	718	717	717	68
15°	672	672	666	659	656	189
25°	583	579	570	550	534	267
35°	473	469	446	413	402	296
45°	363	355	325	298	286	279
55°	252	244	222	195	185	226
65°	150	141	128	130	108	148
75°	60	56	52	50	55	64
85°	8	9	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°	731.5	731.5	731.5	731.5	731.5
2.5°	726.4	726.4	726.4	725.6	725.6
5°	718.8	717.9	717.9	717.1	717.1
7.5°	712.9	712.0	711.2	710.3	708.6
10°	704.4	704.4	703.6	699.3	698.5
12.5°	690.9	690.0	686.7	680.7	679.0
15°	672.3	672.3	665.5	658.8	656.2
17.5°	652.0	651.1	642.7	635.9	632.5
20°	630.0	628.3	619.9	608.9	602.9
22.5°	605.5	605.5	595.3	581.0	575.0
25°	582.6	579.3	570.0	549.7	534.4
27.5°	556.4	551.4	541.2	512.5	494.7
30°	527.7	525.1	510.8	473.6	460.0
32.5°	500.6	496.4	481.2	442.3	431.3
35°	472.7	469.3	446.5	412.7	402.5
37.5°	444.8	440.6	411.8	384.8	372.1
40°	416.9	411.8	380.5	356.0	342.5
42.5°	390.7	383.9	353.5	327.3	312.0
45°	362.8	355.2	324.7	297.7	285.8
47.5°	334.9	328.1	300.2	272.3	258.8
50°	305.3	299.4	274.0	246.1	231.7
52.5°	280.8	271.5	246.9	219.0	207.2
55°	252.0	244.4	221.6	195.3	185.2
57.5°	225.8	218.2	197.0	172.5	164.1
60°	201.3	190.3	172.5	151.4	144.6
62.5°	174.2	165.7	150.5	132.8	141.2
65°	149.7	141.2	127.7	130.2	108.2
67.5°	122.6	118.4	106.6	94.7	91.3
70°	99.8	94.7	90.5	77.8	74.4
72.5°	79.5	74.4	68.5	61.7	59.2
75°	60.0	55.8	52.4	49.9	55.0
77.5°	41.4	39.7	37.2	34.7	33.8
80°	27.1	26.2	25.4	24.5	23.7
82.5°	16.1	16.1	16.1	16.1	16.1
85°	8.5	9.3	10.1	11.0	11.8
87.5°	5.1	5.1	5.9	6.8	7.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)