

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: P560041

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560041
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-35-UNV-93-88-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1291.0 lumens
Efficiency: N/A
Efficacy: 77.8 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

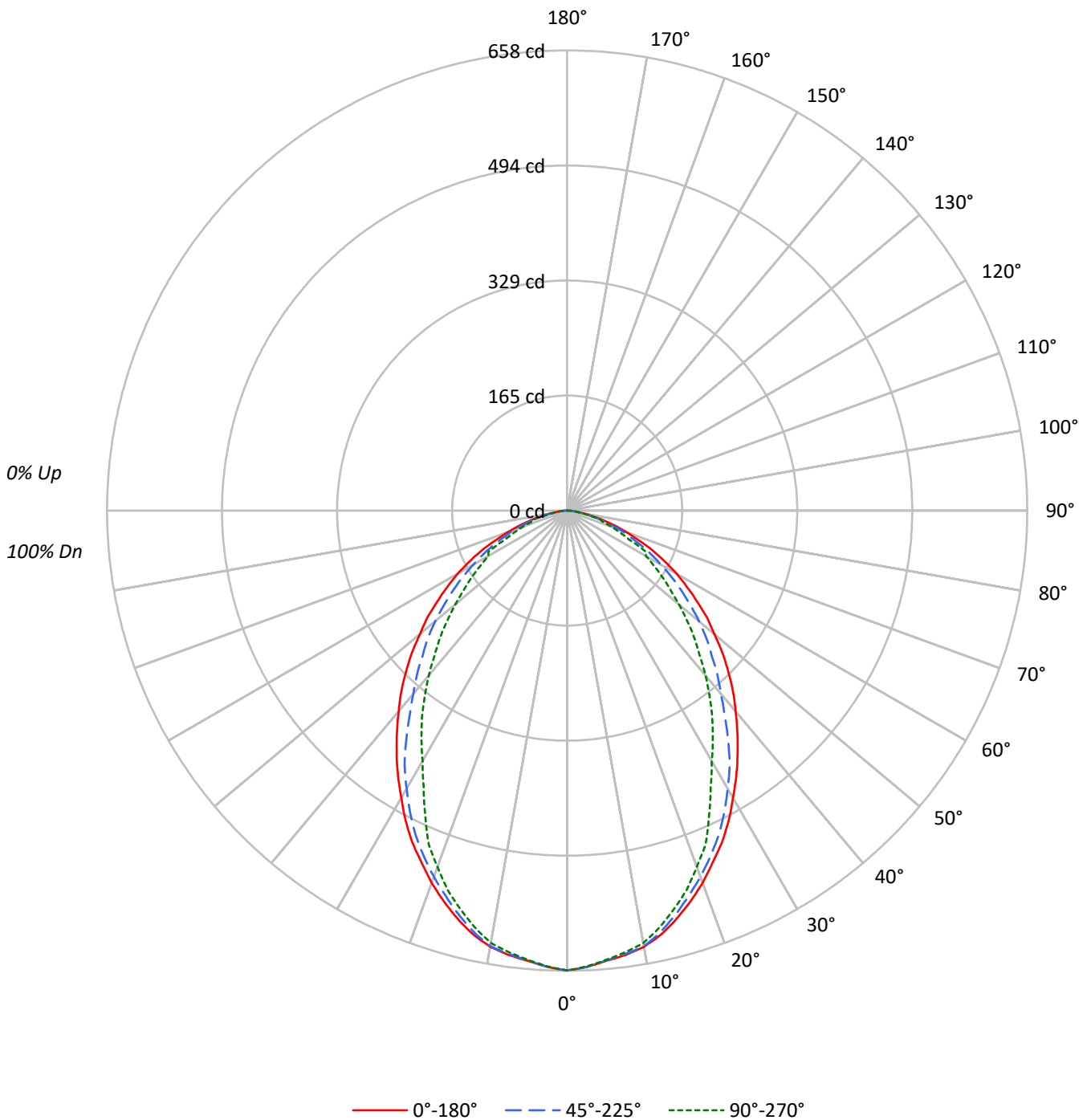
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3539	3539	3539
5°	3491	3487	3483
10°	3461	3457	3432
15°	3368	3334	3287
20°	3244	3192	3105
25°	3110	3043	2853
30°	2948	2854	2570
35°	2792	2637	2378
40°	2633	2403	2163
45°	2482	2222	1956
50°	2298	2062	1744
55°	2126	1869	1562
60°	1947	1669	1399
65°	1714	1462	1239
70°	1412	1279	1053
75°	1123	979	1027
80°	753	707	660
85°	469	562	655

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2482 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.2	4.7
10°-20°	168.0	13.0
20°-30°	232.6	18.0
30°-40°	248.0	19.2
40°-50°	226.2	17.5
50°-60°	177.2	13.7
60°-70°	115.5	8.9
70°-80°	51.2	4.0
80°-90°	11.0	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°	461.8	35.8
0°-40°	709.8	55.0
0°-60°	1113.3	86.2
0°-90°	1291.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1291.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	658	658	658	658	658	
5°	646	646	646	645	645	61
15°	604	604	598	592	590	170
25°	524	521	512	494	480	240
35°	425	422	401	371	362	266
45°	326	319	292	268	257	251
55°	227	220	199	176	166	203
65°	135	127	115	117	97	133
75°	54	50	47	45	49	58
85°	8	8	9	10	11	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	657.6	657.6	657.6	657.6	657.6
2.5°	653.1	653.1	653.1	652.3	652.3
5°	646.2	645.5	645.5	644.7	644.7
7.5°	640.9	640.1	639.4	638.6	637.1
10°	633.3	633.3	632.5	628.7	628.0
12.5°	621.1	620.4	617.3	612.0	610.5
15°	604.4	604.4	598.3	592.2	590.0
17.5°	586.2	585.4	577.8	571.7	568.7
20°	566.4	564.9	557.3	547.4	542.1
22.5°	544.3	544.3	535.2	522.3	517.0
25°	523.8	520.8	512.4	494.2	480.5
27.5°	500.2	495.7	486.6	460.7	444.7
30°	474.4	472.1	459.2	425.7	413.6
32.5°	450.1	446.3	432.6	397.6	387.7
35°	425.0	421.9	401.4	371.0	361.9
37.5°	399.9	396.1	370.2	345.9	334.5
40°	374.8	370.2	342.1	320.1	307.9
42.5°	351.2	345.2	317.8	294.2	280.5
45°	326.1	319.3	291.9	267.6	257.0
47.5°	301.1	295.0	269.9	244.8	232.6
50°	274.5	269.1	246.3	221.2	208.3
52.5°	252.4	244.0	222.0	196.9	186.3
55°	226.6	219.7	199.2	175.6	166.5
57.5°	203.0	196.1	177.1	155.1	147.5
60°	180.9	171.1	155.1	136.1	130.0
62.5°	156.6	149.0	135.3	119.4	127.0
65°	134.6	127.0	114.8	117.1	97.3
67.5°	110.2	106.4	95.8	85.1	82.1
70°	89.7	85.1	81.3	69.9	66.9
72.5°	71.5	66.9	61.6	55.5	53.2
75°	54.0	50.2	47.1	44.9	49.4
77.5°	37.3	35.7	33.5	31.2	30.4
80°	24.3	23.6	22.8	22.0	21.3
82.5°	14.4	14.4	14.4	14.4	14.4
85°	7.6	8.4	9.1	9.9	10.6
87.5°	4.6	4.6	5.3	6.1	6.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)