

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: P560014

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-81-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560014
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-81-97-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1159.0 lumens
Efficiency: N/A
Efficacy: 69.8 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

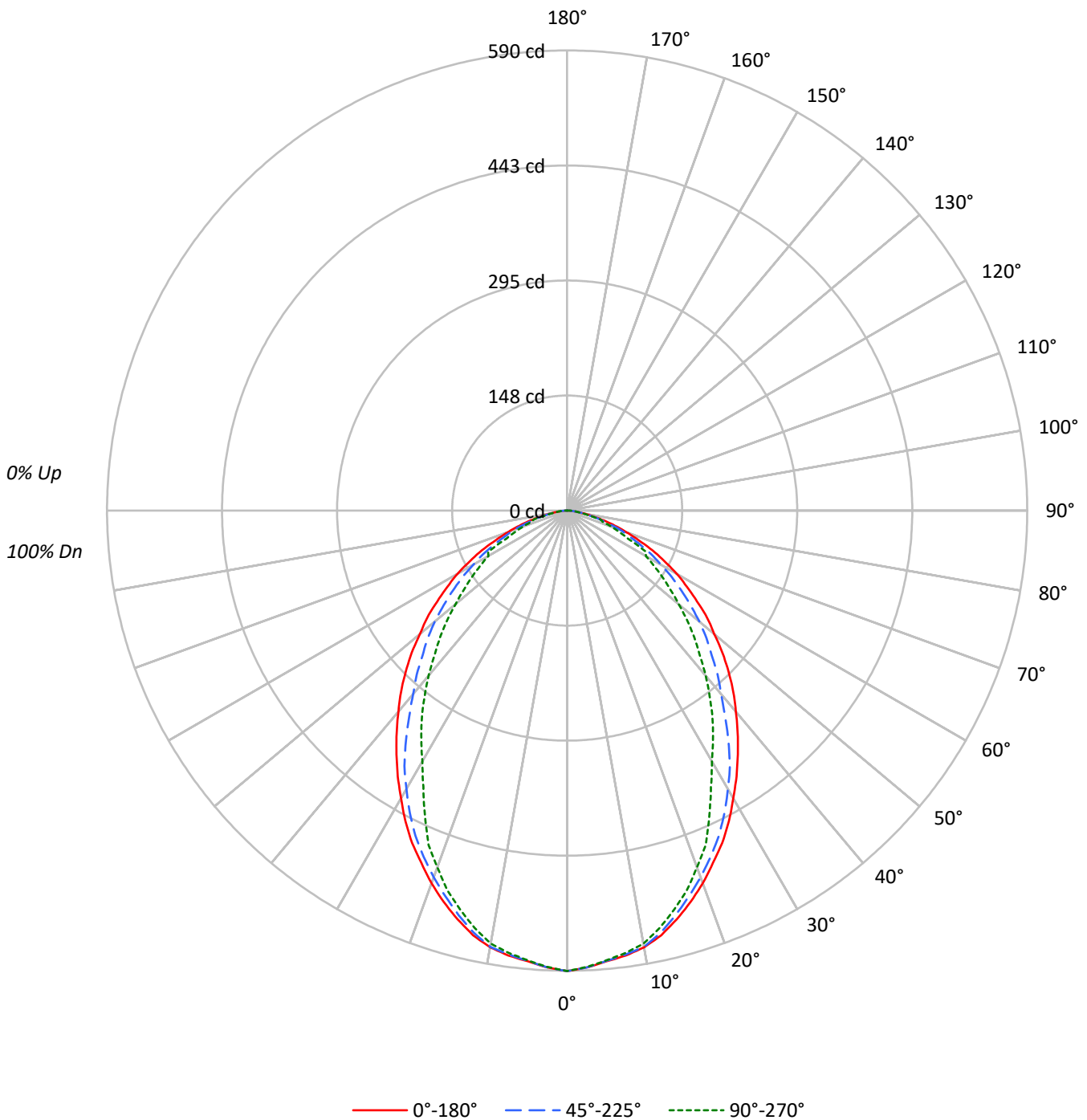
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3178	3178	3178
5°	3134	3131	3127
10°	3107	3104	3081
15°	3023	2993	2951
20°	2912	2865	2787
25°	2793	2732	2562
30°	2647	2562	2307
35°	2507	2368	2135
40°	2364	2158	1942
45°	2229	1995	1756
50°	2063	1851	1566
55°	1909	1678	1403
60°	1748	1498	1256
65°	1538	1313	1113
70°	1267	1149	946
75°	1009	880	923
80°	676	635	592
85°	420	506	593

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2229 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.0	4.7
10°-20°	150.8	13.0
20°-30°	208.8	18.0
30°-40°	222.6	19.2
40°-50°	203.1	17.5
50°-60°	159.1	13.7
60°-70°	103.7	8.9
70°-80°	46.0	4.0
80°-90°	9.9	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°	414.6	35.8
0°-40°	637.2	55.0
0°-60°	999.5	86.2
0°-90°	1159.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1159.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	590	590	590	590	590	
5°	580	580	580	579	579	55
15°	543	543	537	532	530	153
25°	470	468	460	444	431	216
35°	382	379	360	333	325	239
45°	293	287	262	240	231	226
55°	203	197	179	158	150	182
65°	121	114	103	105	87	119
75°	48	45	42	40	44	52
85°	7	8	8	9	10	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	590.4	590.4	590.4	590.4	590.4
2.5°	586.3	586.3	586.3	585.6	585.6
5°	580.1	579.5	579.5	578.8	578.8
7.5°	575.4	574.7	574.0	573.3	572.0
10°	568.5	568.5	567.9	564.4	563.8
12.5°	557.6	556.9	554.2	549.4	548.1
15°	542.6	542.6	537.1	531.7	529.6
17.5°	526.2	525.5	518.7	513.3	510.5
20°	508.5	507.1	500.3	491.4	486.6
22.5°	488.7	488.7	480.5	468.9	464.1
25°	470.3	467.5	460.0	443.6	431.4
27.5°	449.1	445.0	436.8	413.6	399.3
30°	425.9	423.8	412.2	382.2	371.3
32.5°	404.1	400.6	388.4	357.0	348.1
35°	381.5	378.8	360.4	333.1	324.9
37.5°	359.0	355.6	332.4	310.5	300.3
40°	336.5	332.4	307.1	287.3	276.4
42.5°	315.3	309.9	285.3	264.1	251.8
45°	292.8	286.7	262.1	240.2	230.7
47.5°	270.3	264.8	242.3	219.8	208.9
50°	246.4	241.6	221.1	198.6	187.0
52.5°	226.6	219.1	199.3	176.8	167.2
55°	203.4	197.2	178.8	157.7	149.5
57.5°	182.2	176.1	159.0	139.2	132.4
60°	162.4	153.6	139.2	122.2	116.7
62.5°	140.6	133.8	121.5	107.2	114.0
65°	120.8	114.0	103.1	105.1	87.4
67.5°	99.0	95.6	86.0	76.4	73.7
70°	80.5	76.4	73.0	62.8	60.1
72.5°	64.2	60.1	55.3	49.8	47.8
75°	48.5	45.0	42.3	40.3	44.4
77.5°	33.4	32.1	30.0	28.0	27.3
80°	21.8	21.2	20.5	19.8	19.1
82.5°	13.0	13.0	13.0	13.0	13.0
85°	6.8	7.5	8.2	8.9	9.6
87.5°	4.1	4.1	4.8	5.5	6.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)