

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: P560038

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-93-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560038
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-93-87-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1199.0 lumens
Efficiency: N/A
Efficacy: 72.2 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

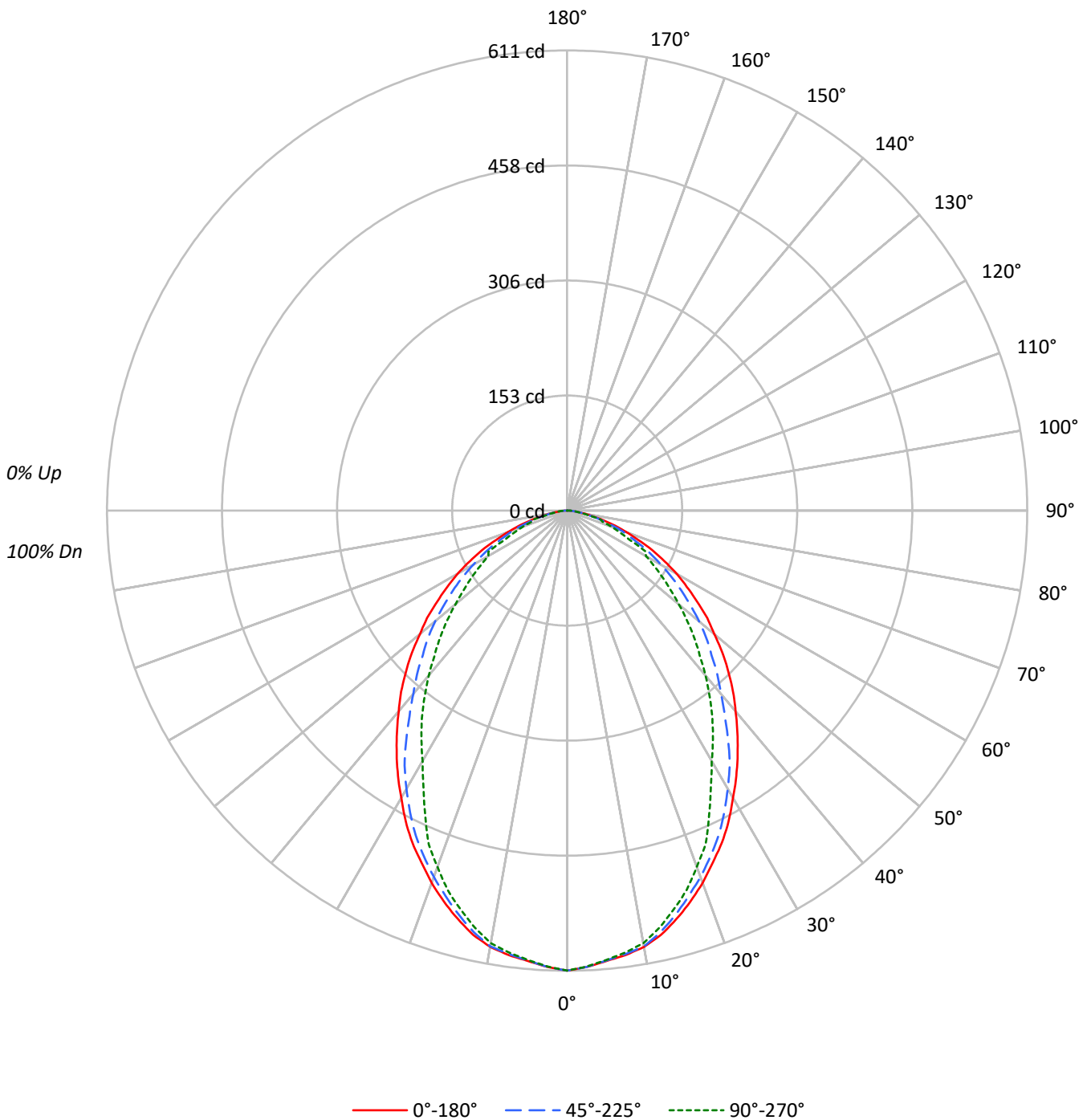
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3287	3287	3287
5°	3243	3239	3235
10°	3215	3211	3187
15°	3127	3096	3053
20°	3013	2964	2883
25°	2889	2826	2650
30°	2738	2651	2387
35°	2593	2449	2208
40°	2446	2232	2009
45°	2305	2063	1817
50°	2134	1916	1620
55°	1974	1736	1451
60°	1808	1550	1299
65°	1592	1358	1151
70°	1311	1188	977
75°	1042	911	954
80°	700	657	614
85°	438	525	611

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2305 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.9	4.7
10°-20°	156.0	13.0
20°-30°	216.0	18.0
30°-40°	230.3	19.2
40°-50°	210.1	17.5
50°-60°	164.6	13.7
60°-70°	107.3	8.9
70°-80°	47.5	4.0
80°-90°	10.2	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°	428.9	35.8
0°-40°	659.2	55.0
0°-60°	1034.0	86.2
0°-90°	1199.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1199.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	611	611	611	611	611	
5°	600	600	600	599	599	57
15°	561	561	556	550	548	158
25°	486	484	476	459	446	223
35°	395	392	373	345	336	247
45°	303	297	271	248	239	233
55°	210	204	185	163	155	189
65°	125	118	107	109	90	123
75°	50	47	44	42	46	54
85°	7	8	8	9	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	610.8	610.8	610.8	610.8	610.8
2.5°	606.5	606.5	606.5	605.8	605.8
5°	600.2	599.5	599.5	598.8	598.8
7.5°	595.2	594.5	593.8	593.1	591.7
10°	588.2	588.2	587.5	583.9	583.2
12.5°	576.9	576.2	573.3	568.4	567.0
15°	561.3	561.3	555.7	550.0	547.9
17.5°	544.4	543.7	536.6	531.0	528.1
20°	526.0	524.6	517.6	508.4	503.4
22.5°	505.5	505.5	497.1	485.1	480.1
25°	486.5	483.7	475.9	458.9	446.2
27.5°	464.6	460.4	451.9	427.9	413.1
30°	440.6	438.5	426.5	395.4	384.1
32.5°	418.0	414.5	401.8	369.3	360.1
35°	394.7	391.9	372.8	344.6	336.1
37.5°	371.4	367.9	343.9	321.3	310.7
40°	348.1	343.9	317.7	297.3	286.0
42.5°	326.2	320.6	295.1	273.3	260.5
45°	302.9	296.6	271.1	248.5	238.7
47.5°	279.6	274.0	250.7	227.4	216.1
50°	254.9	250.0	228.8	205.5	193.5
52.5°	234.4	226.6	206.2	182.9	173.0
55°	210.4	204.1	185.0	163.1	154.6
57.5°	188.5	182.2	164.5	144.0	137.0
60°	168.0	158.9	144.0	126.4	120.7
62.5°	145.5	138.4	125.7	110.9	117.9
65°	125.0	117.9	106.6	108.7	90.4
67.5°	102.4	98.9	89.0	79.1	76.3
70°	83.3	79.1	75.5	65.0	62.1
72.5°	66.4	62.1	57.2	51.5	49.4
75°	50.1	46.6	43.8	41.7	45.9
77.5°	34.6	33.2	31.1	28.9	28.2
80°	22.6	21.9	21.2	20.5	19.8
82.5°	13.4	13.4	13.4	13.4	13.4
85°	7.1	7.8	8.5	9.2	9.9
87.5°	4.2	4.2	4.9	5.6	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)