

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: P560100

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-93-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560100
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-93-86-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1257.0 lumens
Efficiency: N/A
Efficacy: 75.7 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

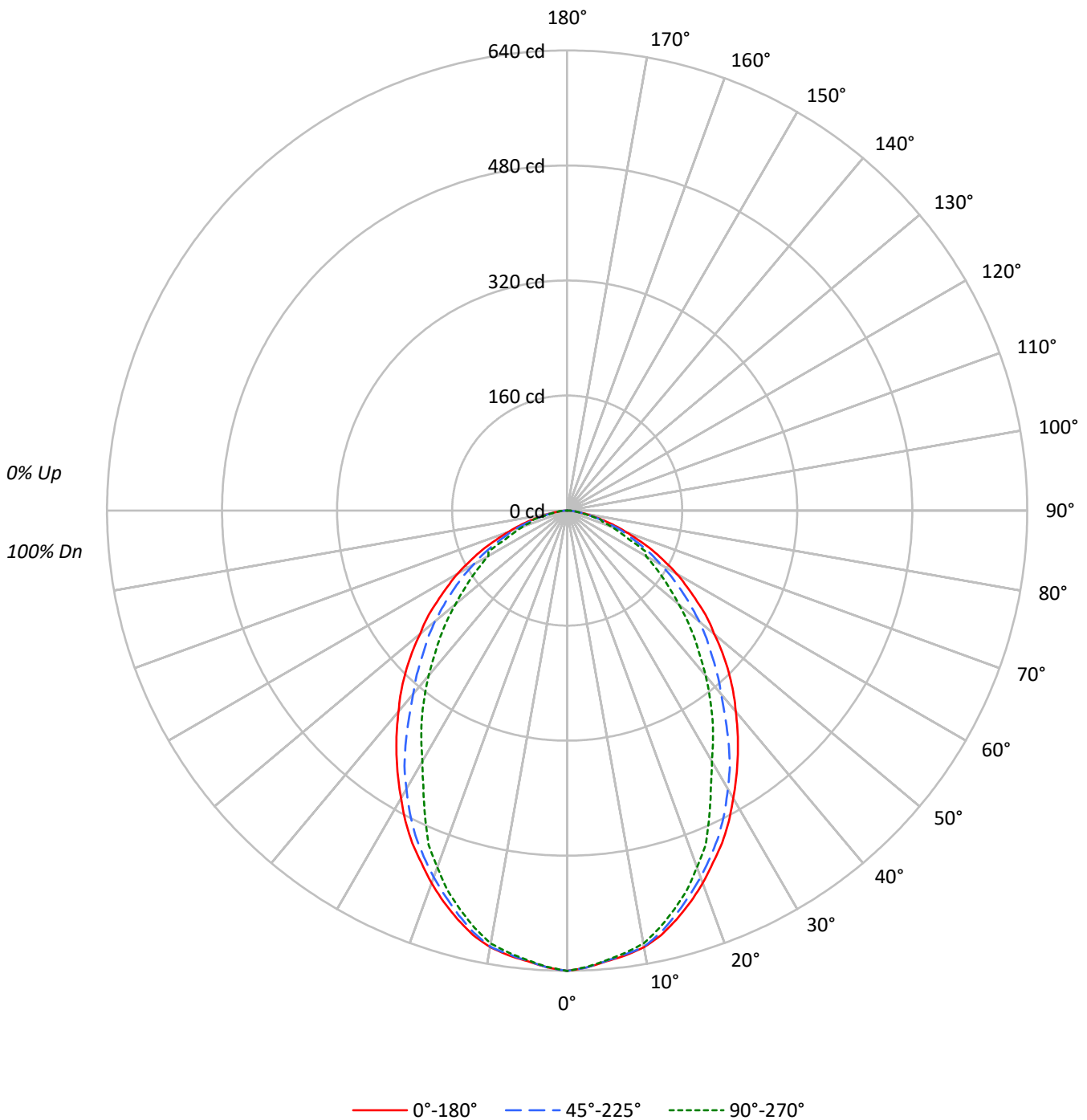
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3446	3446	3446
5°	3399	3395	3391
10°	3370	3366	3341
15°	3279	3246	3200
20°	3159	3108	3023
25°	3029	2963	2778
30°	2871	2779	2503
35°	2719	2568	2315
40°	2564	2340	2106
45°	2417	2163	1904
50°	2237	2008	1698
55°	2070	1819	1521
60°	1897	1625	1363
65°	1668	1424	1206
70°	1374	1246	1024
75°	1094	954	1000
80°	735	688	642
85°	457	550	642

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2417 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.6	4.7
10°-20°	163.6	13.0
20°-30°	226.5	18.0
30°-40°	241.5	19.2
40°-50°	220.3	17.5
50°-60°	172.6	13.7
60°-70°	112.5	8.9
70°-80°	49.8	4.0
80°-90°	10.7	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°	449.6	35.8
0°-40°	691.1	55.0
0°-60°	1084.0	86.2
0°-90°	1257.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1257.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	640	640	640	640	640	
5°	629	628	628	628	628	60
15°	588	588	583	577	574	165
25°	510	507	499	481	468	234
35°	414	411	391	361	352	259
45°	318	311	284	261	250	245
55°	221	214	194	171	162	198
65°	131	124	112	114	95	129
75°	53	49	46	44	48	56
85°	7	8	9	10	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	640.3	640.3	640.3	640.3	640.3
2.5°	635.9	635.9	635.9	635.1	635.1
5°	629.2	628.5	628.5	627.7	627.7
7.5°	624.0	623.3	622.5	621.8	620.3
10°	616.6	616.6	615.9	612.2	611.4
12.5°	604.8	604.0	601.1	595.9	594.4
15°	588.5	588.5	582.6	576.6	574.4
17.5°	570.7	570.0	562.6	556.7	553.7
20°	551.5	550.0	542.6	533.0	527.8
22.5°	530.0	530.0	521.1	508.5	503.4
25°	510.0	507.1	498.9	481.1	467.8
27.5°	487.1	482.6	473.7	448.6	433.0
30°	461.9	459.7	447.1	414.5	402.7
32.5°	438.2	434.5	421.2	387.1	377.5
35°	413.8	410.8	390.8	361.2	352.3
37.5°	389.4	385.7	360.5	336.8	325.7
40°	364.9	360.5	333.1	311.6	299.8
42.5°	342.0	336.1	309.4	286.5	273.1
45°	317.6	310.9	284.2	260.6	250.2
47.5°	293.1	287.2	262.8	238.4	226.5
50°	267.2	262.0	239.8	215.4	202.8
52.5°	245.8	237.6	216.1	191.7	181.4
55°	220.6	213.9	193.9	171.0	162.1
57.5°	197.6	191.0	172.5	151.0	143.6
60°	176.2	166.6	151.0	132.5	126.6
62.5°	152.5	145.1	131.8	116.2	123.6
65°	131.0	123.6	111.8	114.0	94.7
67.5°	107.3	103.6	93.3	82.9	79.9
70°	87.3	82.9	79.2	68.1	65.1
72.5°	69.6	65.1	60.0	54.0	51.8
75°	52.6	48.9	45.9	43.7	48.1
77.5°	36.3	34.8	32.6	30.3	29.6
80°	23.7	22.9	22.2	21.5	20.7
82.5°	14.1	14.1	14.1	14.1	14.1
85°	7.4	8.1	8.9	9.6	10.4
87.5°	4.4	4.4	5.2	5.9	6.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)