

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: P560034

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560034
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-93-85-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1254.0 lumens
Efficiency: N/A
Efficacy: 75.5 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

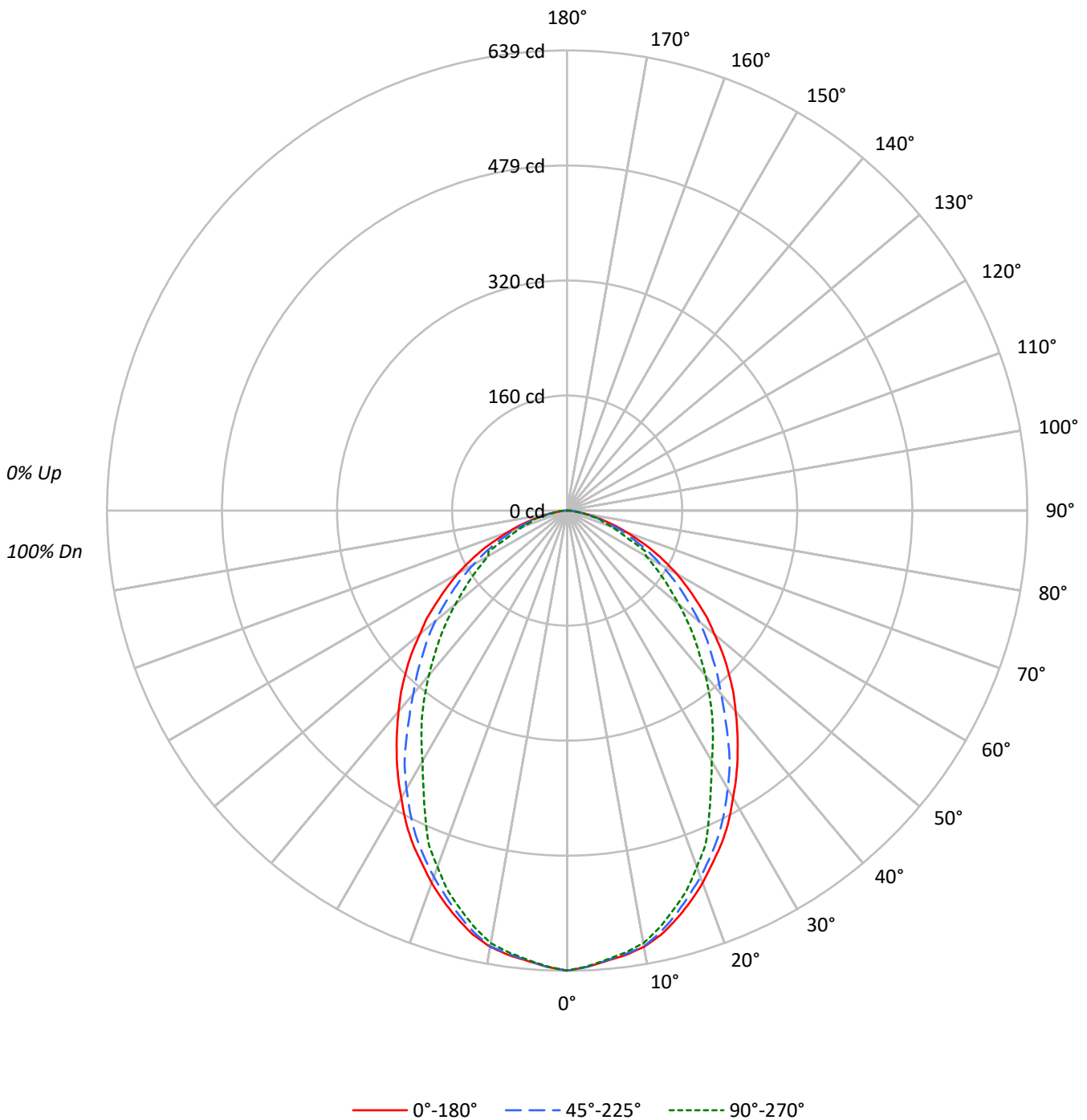
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3438	3438	3438
5°	3391	3387	3383
10°	3362	3358	3334
15°	3271	3238	3193
20°	3151	3100	3015
25°	3021	2956	2771
30°	2864	2772	2496
35°	2712	2562	2309
40°	2558	2335	2101
45°	2411	2159	1900
50°	2232	2004	1694
55°	2065	1816	1517
60°	1892	1621	1359
65°	1664	1420	1203
70°	1371	1243	1023
75°	1090	952	998
80°	731	688	642
85°	457	550	636

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2411 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	4.7
10°-20°	163.2	13.0
20°-30°	225.9	18.0
30°-40°	240.9	19.2
40°-50°	219.8	17.5
50°-60°	172.2	13.7
60°-70°	112.2	8.9
70°-80°	49.7	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°	448.6	35.8
0°-40°	689.5	55.0
0°-60°	1081.4	86.2
0°-90°	1254.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1254.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	639	639	639	639	639	
5°	628	627	627	626	626	60
15°	587	587	581	575	573	165
25°	509	506	498	480	467	234
35°	413	410	390	360	352	258
45°	317	310	284	260	250	244
55°	220	213	194	171	162	197
65°	131	123	112	114	94	129
75°	52	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°	638.8	638.8	638.8	638.8	638.8
2.5°	634.3	634.3	634.3	633.6	633.6
5°	627.7	627.0	627.0	626.2	626.2
7.5°	622.5	621.8	621.0	620.3	618.8
10°	615.1	615.1	614.4	610.7	610.0
12.5°	603.3	602.6	599.6	594.5	593.0
15°	587.1	587.1	581.2	575.3	573.0
17.5°	569.4	568.6	561.2	555.3	552.4
20°	550.2	548.7	541.3	531.7	526.5
22.5°	528.7	528.7	519.9	507.3	502.2
25°	508.8	505.8	497.7	480.0	466.7
27.5°	485.9	481.5	472.6	447.5	432.0
30°	460.8	458.6	446.0	413.5	401.7
32.5°	437.2	433.5	420.2	386.2	376.6
35°	412.8	409.8	389.9	360.4	351.5
37.5°	388.4	384.7	359.6	336.0	324.9
40°	364.1	359.6	332.3	310.9	299.1
42.5°	341.2	335.3	308.7	285.8	272.5
45°	316.8	310.2	283.6	259.9	249.6
47.5°	292.4	286.5	262.2	237.8	226.0
50°	266.6	261.4	239.3	214.9	202.3
52.5°	245.2	237.0	215.6	191.3	180.9
55°	220.1	213.4	193.5	170.6	161.7
57.5°	197.2	190.5	172.1	150.6	143.3
60°	175.8	166.2	150.6	132.2	126.3
62.5°	152.1	144.7	131.4	115.9	123.3
65°	130.7	123.3	111.5	113.7	94.5
67.5°	107.1	103.4	93.0	82.7	79.8
70°	87.1	82.7	79.0	67.9	65.0
72.5°	69.4	65.0	59.8	53.9	51.7
75°	52.4	48.7	45.8	43.6	48.0
77.5°	36.2	34.7	32.5	30.3	29.5
80°	23.6	22.9	22.2	21.4	20.7
82.5°	14.0	14.0	14.0	14.0	14.0
85°	7.4	8.1	8.9	9.6	10.3
87.5°	4.4	4.4	5.2	5.9	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)