

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: P560012

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-81-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560012
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-81-96-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 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: 1202.0 lumens
Efficiency: N/A
Efficacy: 72.4 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

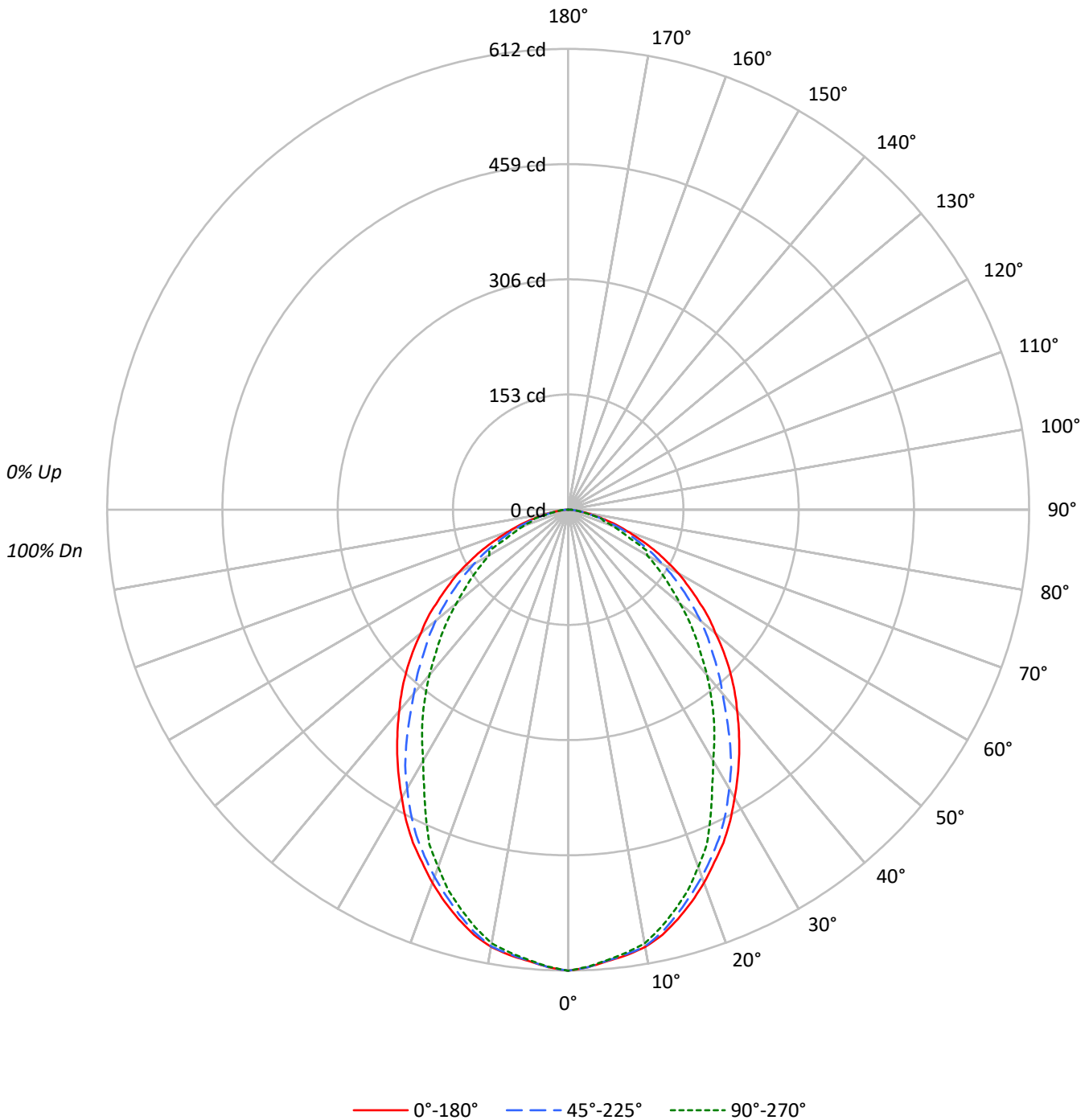
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3295	3295	3295
5°	3251	3247	3243
10°	3222	3218	3195
15°	3135	3104	3061
20°	3020	2971	2891
25°	2896	2833	2657
30°	2745	2657	2393
35°	2600	2455	2213
40°	2452	2238	2014
45°	2312	2069	1821
50°	2139	1920	1623
55°	1979	1741	1454
60°	1814	1554	1302
65°	1596	1361	1154
70°	1314	1191	980
75°	1046	913	957
80°	704	657	614
85°	438	525	611

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2312 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.0	4.7
10°-20°	156.4	13.0
20°-30°	216.6	18.0
30°-40°	230.9	19.2
40°-50°	210.7	17.5
50°-60°	165.0	13.7
60°-70°	107.6	8.9
70°-80°	47.6	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°	430.0	35.8
0°-40°	660.9	55.0
0°-60°	1036.6	86.2
0°-90°	1202.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1202.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	612	612	612	612	612	
5°	602	601	601	600	600	57
15°	563	563	557	551	549	158
25°	488	485	477	460	447	224
35°	396	393	374	345	337	247
45°	304	297	272	249	239	234
55°	211	205	186	164	155	189
65°	125	118	107	109	91	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°	612.3	612.3	612.3	612.3	612.3
2.5°	608.0	608.0	608.0	607.3	607.3
5°	601.7	601.0	601.0	600.2	600.2
7.5°	596.7	596.0	595.3	594.6	593.2
10°	589.6	589.6	588.9	585.4	584.7
12.5°	578.3	577.6	574.8	569.8	568.4
15°	562.7	562.7	557.1	551.4	549.3
17.5°	545.7	545.0	538.0	532.3	529.5
20°	527.3	525.9	518.8	509.6	504.7
22.5°	506.8	506.8	498.3	486.3	481.3
25°	487.7	484.9	477.1	460.1	447.4
27.5°	465.8	461.5	453.0	429.0	414.1
30°	441.7	439.6	427.5	396.4	385.1
32.5°	419.0	415.5	402.8	370.2	361.0
35°	395.7	392.9	373.7	345.4	336.9
37.5°	372.3	368.8	344.7	322.1	311.5
40°	349.0	344.7	318.5	298.0	286.7
42.5°	327.0	321.4	295.9	273.9	261.2
45°	303.7	297.3	271.8	249.2	239.3
47.5°	280.3	274.6	251.3	227.9	216.6
50°	255.5	250.6	229.3	206.0	193.9
52.5°	235.0	227.2	206.7	183.3	173.4
55°	210.9	204.6	185.5	163.5	155.0
57.5°	189.0	182.6	164.9	144.4	137.3
60°	168.5	159.3	144.4	126.7	121.0
62.5°	145.8	138.7	126.0	111.1	118.2
65°	125.3	118.2	106.9	109.0	90.6
67.5°	102.6	99.1	89.2	79.3	76.4
70°	83.5	79.3	75.7	65.1	62.3
72.5°	66.5	62.3	57.3	51.7	49.5
75°	50.3	46.7	43.9	41.8	46.0
77.5°	34.7	33.3	31.1	29.0	28.3
80°	22.7	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	5.0	5.7	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)