

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: P560028

Luminaire Tested: FSR-12-2-LD4-1STD-35-UNV-82-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560028
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-82-96-EDD-90
Description: 1X2 FSR TROFFER WITH .187 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: 1177.0 lumens
Efficiency: N/A
Efficacy: 70.9 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

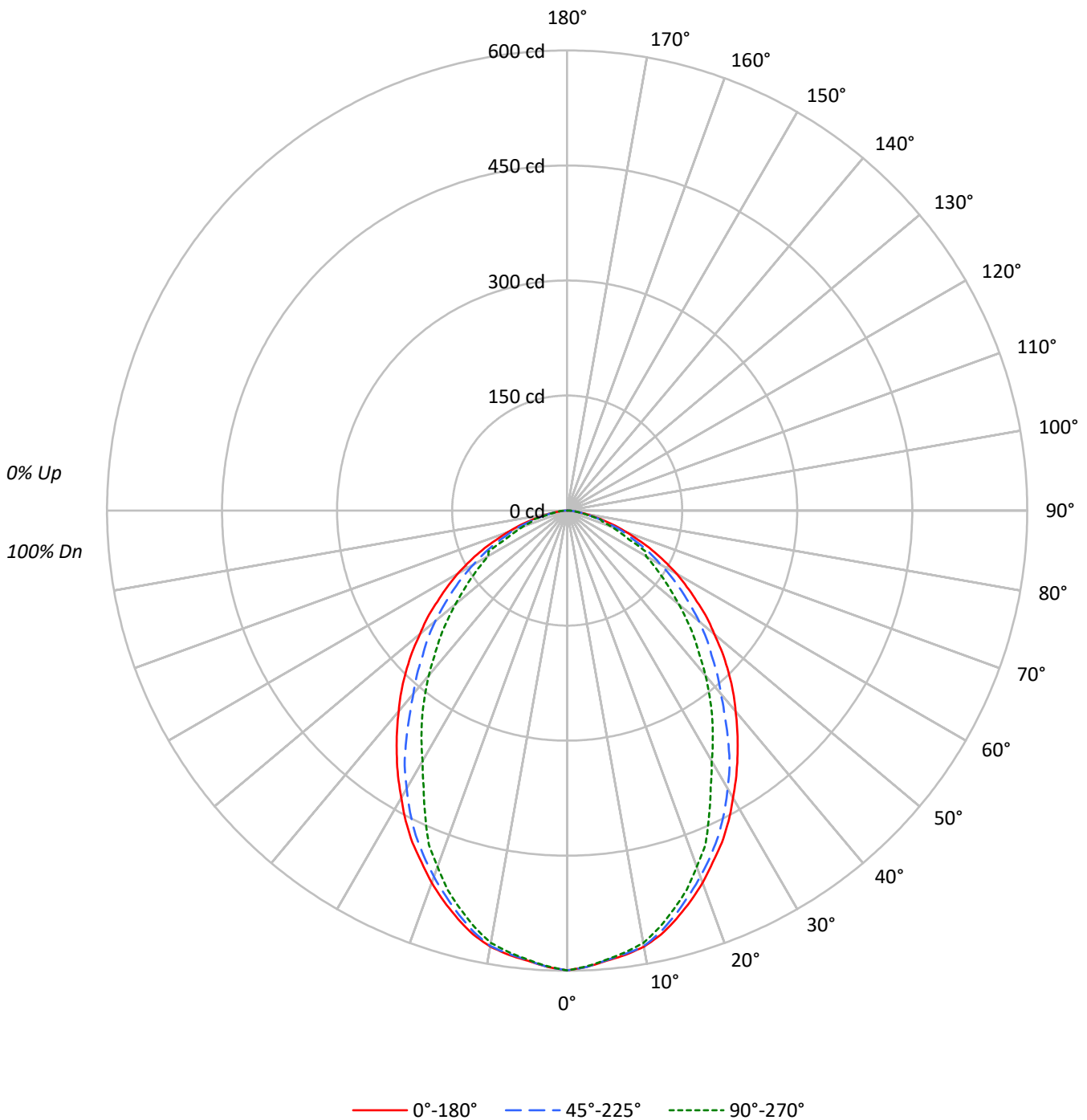
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3226	3226	3226
5°	3183	3179	3176
10°	3155	3152	3129
15°	3070	3039	2997
20°	2958	2910	2830
25°	2836	2774	2602
30°	2688	2601	2344
35°	2546	2405	2167
40°	2401	2191	1972
45°	2263	2026	1783
50°	2095	1881	1590
55°	1938	1704	1424
60°	1776	1522	1276
65°	1563	1333	1130
70°	1287	1168	960
75°	1023	894	938
80°	688	645	601
85°	426	513	599

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2263 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.8	4.7
10°-20°	153.2	13.0
20°-30°	212.1	18.0
30°-40°	226.1	19.2
40°-50°	206.3	17.5
50°-60°	161.6	13.7
60°-70°	105.3	8.9
70°-80°	46.7	4.0
80°-90°	10.0	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°	421.0	35.8
0°-40°	647.1	55.0
0°-60°	1015.0	86.2
0°-90°	1177.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1177.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	600	600	600	600	600	
5°	589	588	588	588	588	56
15°	551	551	546	540	538	155
25°	478	475	467	450	438	219
35°	388	385	366	338	330	242
45°	297	291	266	244	234	229
55°	206	200	182	160	152	185
65°	123	116	105	107	89	121
75°	49	46	43	41	45	53
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°	599.5	599.5	599.5	599.5	599.5
2.5°	595.4	595.4	595.4	594.7	594.7
5°	589.2	588.5	588.5	587.8	587.8
7.5°	584.3	583.6	582.9	582.2	580.8
10°	577.4	577.4	576.7	573.2	572.5
12.5°	566.3	565.6	562.8	558.0	556.6
15°	551.0	551.0	545.5	539.9	537.9
17.5°	534.4	533.7	526.8	521.2	518.5
20°	516.4	515.0	508.1	499.0	494.2
22.5°	496.3	496.3	488.0	476.2	471.3
25°	477.6	474.8	467.2	450.5	438.1
27.5°	456.1	451.9	443.6	420.0	405.5
30°	432.5	430.4	418.6	388.1	377.1
32.5°	410.3	406.9	394.4	362.5	353.5
35°	387.5	384.7	366.0	338.2	329.9
37.5°	364.6	361.1	337.5	315.4	305.0
40°	341.7	337.5	311.9	291.8	280.7
42.5°	320.2	314.7	289.7	268.2	255.8
45°	297.3	291.1	266.2	244.0	234.3
47.5°	274.5	268.9	246.1	223.2	212.1
50°	250.2	245.4	224.6	201.7	189.9
52.5°	230.1	222.5	202.4	179.5	169.8
55°	206.5	200.3	181.6	160.1	151.8
57.5°	185.1	178.8	161.5	141.4	134.5
60°	165.0	156.0	141.4	124.1	118.5
62.5°	142.8	135.9	123.4	108.8	115.8
65°	122.7	115.8	104.7	106.7	88.7
67.5°	100.5	97.0	87.3	77.6	74.9
70°	81.8	77.6	74.2	63.8	61.0
72.5°	65.2	61.0	56.1	50.6	48.5
75°	49.2	45.7	43.0	40.9	45.1
77.5°	34.0	32.6	30.5	28.4	27.7
80°	22.2	21.5	20.8	20.1	19.4
82.5°	13.2	13.2	13.2	13.2	13.2
85°	6.9	7.6	8.3	9.0	9.7
87.5°	4.2	4.2	4.9	5.5	6.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)