

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: P560090

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560090
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-82-94-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1207.0 lumens
Efficiency: N/A
Efficacy: 72.7 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

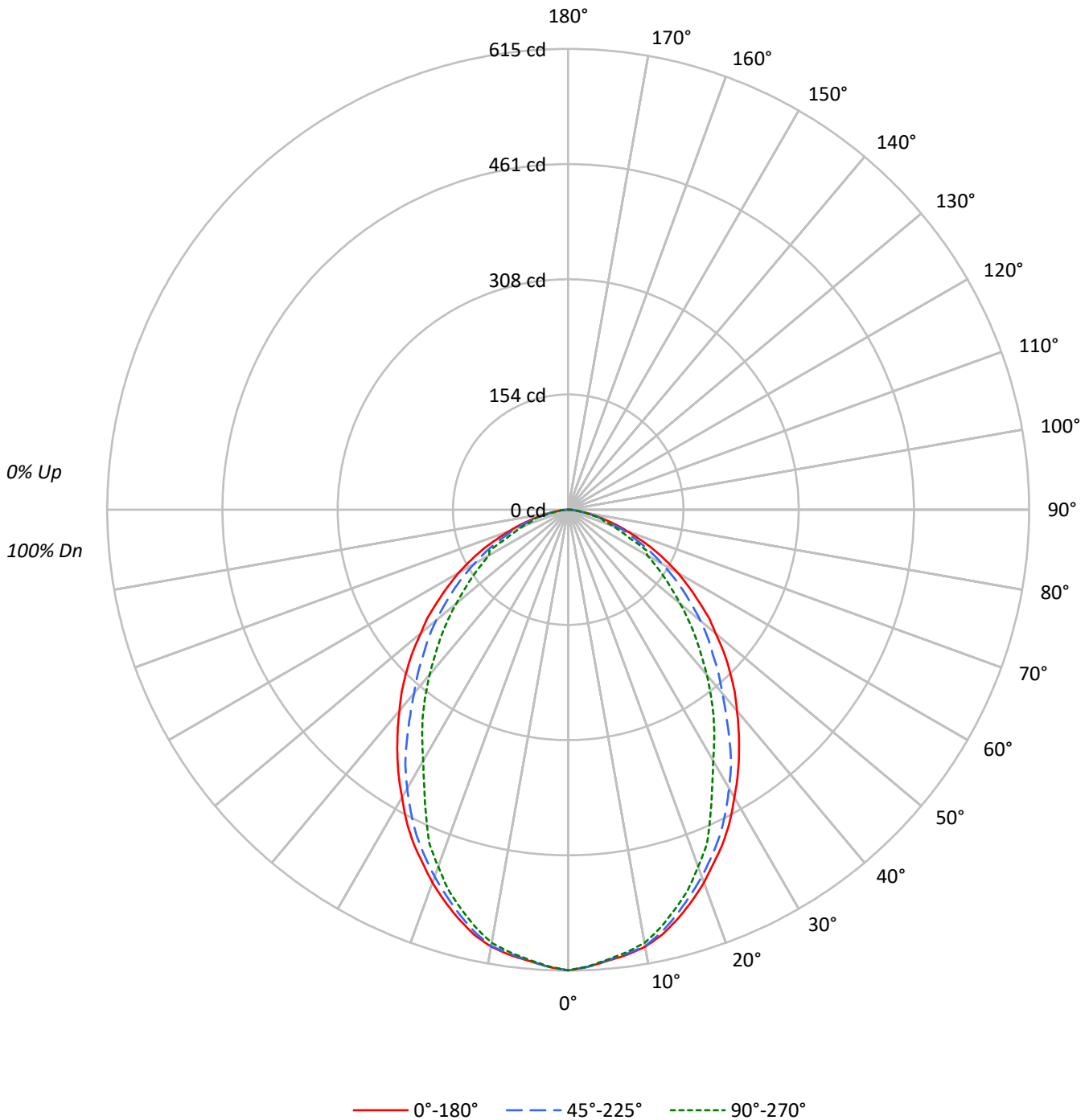
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	3309	3309	3309
5°	3264	3260	3256
10°	3236	3232	3208
15°	3149	3117	3073
20°	3033	2984	2903
25°	2908	2845	2667
30°	2756	2668	2403
35°	2610	2466	2223
40°	2462	2248	2023
45°	2321	2077	1828
50°	2148	1928	1631
55°	1987	1747	1461
60°	1821	1561	1308
65°	1602	1366	1159
70°	1320	1197	983
75°	1050	917	961
80°	704	660	617
85°	438	525	618

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2321 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.2	4.7
10°-20°	157.1	13.0
20°-30°	217.4	18.0
30°-40°	231.9	19.2
40°-50°	211.5	17.5
50°-60°	165.7	13.7
60°-70°	108.0	8.9
70°-80°	47.8	4.0
80°-90°	10.3	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°	431.8	35.8
0°-40°	663.6	55.0
0°-60°	1040.9	86.2
0°-90°	1207.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1207.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	615	615	615	615	615	
5°	604	604	604	603	603	57
15°	565	565	559	554	552	159
25°	490	487	479	462	449	225
35°	397	394	375	347	338	248
45°	305	298	273	250	240	235
55°	212	205	186	164	156	190
65°	126	119	107	110	91	124
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°	614.8	614.8	614.8	614.8	614.8
2.5°	610.6	610.6	610.6	609.9	609.9
5°	604.2	603.5	603.5	602.7	602.7
7.5°	599.2	598.5	597.8	597.1	595.6
10°	592.1	592.1	591.4	587.8	587.1
12.5°	580.7	580.0	577.2	572.2	570.8
15°	565.1	565.1	559.4	553.7	551.6
17.5°	548.0	547.3	540.2	534.5	531.7
20°	529.5	528.1	521.0	511.8	506.8
22.5°	508.9	508.9	500.4	488.3	483.3
25°	489.7	486.9	479.1	462.0	449.2
27.5°	467.7	463.4	454.9	430.7	415.8
30°	443.5	441.4	429.3	398.0	386.7
32.5°	420.8	417.2	404.4	371.7	362.5
35°	397.3	394.5	375.3	346.9	338.3
37.5°	373.9	370.3	346.2	323.4	312.7
40°	350.4	346.2	319.9	299.2	287.9
42.5°	328.4	322.7	297.1	275.1	262.3
45°	304.9	298.5	272.9	250.2	240.2
47.5°	281.5	275.8	252.3	228.9	217.5
50°	256.6	251.6	230.3	206.8	194.8
52.5°	236.0	228.2	207.5	184.1	174.1
55°	211.8	205.4	186.2	164.2	155.7
57.5°	189.8	183.4	165.6	145.0	137.9
60°	169.2	159.9	145.0	127.2	121.5
62.5°	146.4	139.3	126.5	111.6	118.7
65°	125.8	118.7	107.3	109.5	91.0
67.5°	103.1	99.5	89.6	79.6	76.8
70°	83.9	79.6	76.1	65.4	62.5
72.5°	66.8	62.5	57.6	51.9	49.8
75°	50.5	46.9	44.1	41.9	46.2
77.5°	34.8	33.4	31.3	29.1	28.4
80°	22.7	22.0	21.3	20.6	19.9
82.5°	13.5	13.5	13.5	13.5	13.5
85°	7.1	7.8	8.5	9.2	10.0
87.5°	4.3	4.3	5.0	5.7	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)