

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: P560082

Luminaire Tested: FSR-12-2-LD4-1STD-40-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560082
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-82-85-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1180.0 lumens
Efficiency: N/A
Efficacy: 71.1 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

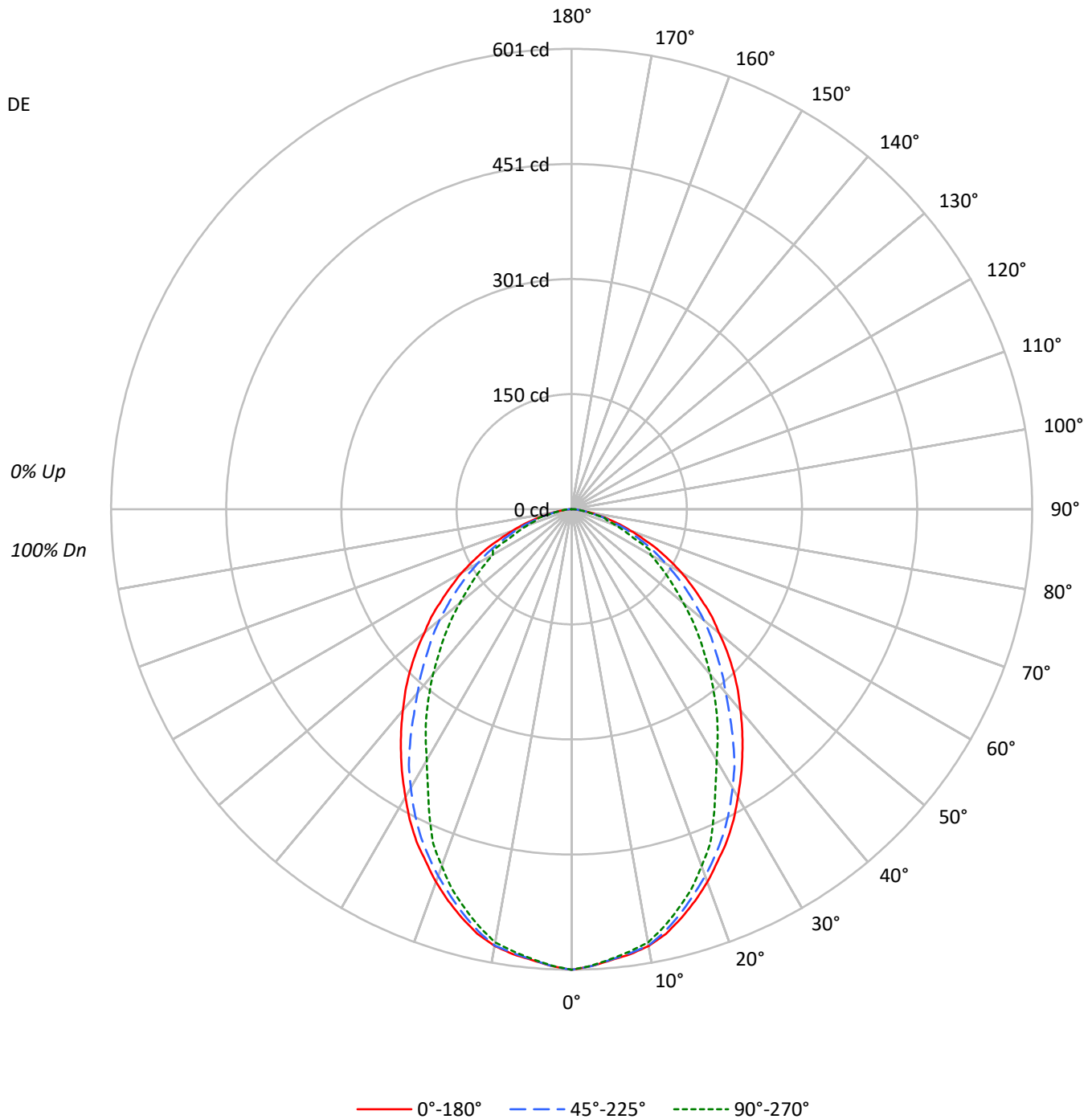
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3235	3235	3235
5°	3191	3187	3184
10°	3163	3159	3137
15°	3078	3047	3004
20°	2965	2918	2838
25°	2843	2782	2608
30°	2695	2608	2349
35°	2552	2411	2173
40°	2407	2197	1977
45°	2269	2031	1788
50°	2101	1885	1594
55°	1943	1709	1428
60°	1780	1526	1279
65°	1566	1336	1132
70°	1290	1171	961
75°	1025	896	940
80°	688	645	604
85°	426	513	599

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2269 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.0	4.7
10°-20°	153.6	13.0
20°-30°	212.6	18.0
30°-40°	226.7	19.2
40°-50°	206.8	17.5
50°-60°	162.0	13.7
60°-70°	105.6	8.9
70°-80°	46.8	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°	422.1	35.8
0°-40°	648.8	55.0
0°-60°	1017.6	86.2
0°-90°	1180.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1180.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	601	601	601	601	601	
5°	591	590	590	589	589	56
15°	552	552	547	541	539	155
25°	479	476	468	452	439	220
35°	388	386	367	339	331	243
45°	298	292	267	245	235	230
55°	207	201	182	160	152	186
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°	601.1	601.1	601.1	601.1	601.1
2.5°	596.9	596.9	596.9	596.2	596.2
5°	590.7	590.0	590.0	589.3	589.3
7.5°	585.8	585.1	584.4	583.7	582.3
10°	578.8	578.8	578.1	574.7	574.0
12.5°	567.7	567.0	564.2	559.4	558.0
15°	552.4	552.4	546.9	541.3	539.2
17.5°	535.8	535.1	528.1	522.6	519.8
20°	517.7	516.3	509.4	500.3	495.5
22.5°	497.5	497.5	489.2	477.4	472.5
25°	478.8	476.0	468.4	451.7	439.2
27.5°	457.2	453.1	444.7	421.1	406.5
30°	433.6	431.5	419.7	389.1	378.0
32.5°	411.4	407.9	395.4	363.4	354.4
35°	388.4	385.7	366.9	339.1	330.8
37.5°	365.5	362.0	338.4	316.2	305.7
40°	342.6	338.4	312.7	292.5	281.4
42.5°	321.0	315.5	290.5	268.9	256.4
45°	298.1	291.9	266.8	244.6	234.9
47.5°	275.2	269.6	246.7	223.8	212.6
50°	250.9	246.0	225.1	202.2	190.4
52.5°	230.7	223.1	202.9	180.0	170.2
55°	207.1	200.8	182.1	160.5	152.2
57.5°	185.5	179.3	161.9	141.8	134.8
60°	165.4	156.3	141.8	124.4	118.8
62.5°	143.1	136.2	123.7	109.1	116.0
65°	123.0	116.0	104.9	107.0	88.9
67.5°	100.8	97.3	87.6	77.8	75.0
70°	82.0	77.8	74.4	63.9	61.1
72.5°	65.3	61.1	56.3	50.7	48.6
75°	49.3	45.9	43.1	41.0	45.2
77.5°	34.0	32.7	30.6	28.5	27.8
80°	22.2	21.5	20.8	20.2	19.5
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	5.6	6.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)