

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: P560148

Luminaire Tested: FSR-12-2-LD4-1STD-50-UNV-82-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560148
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-50-UNV-82-86-EDD-90
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1228.0 lumens
Efficiency: N/A
Efficacy: 74.0 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

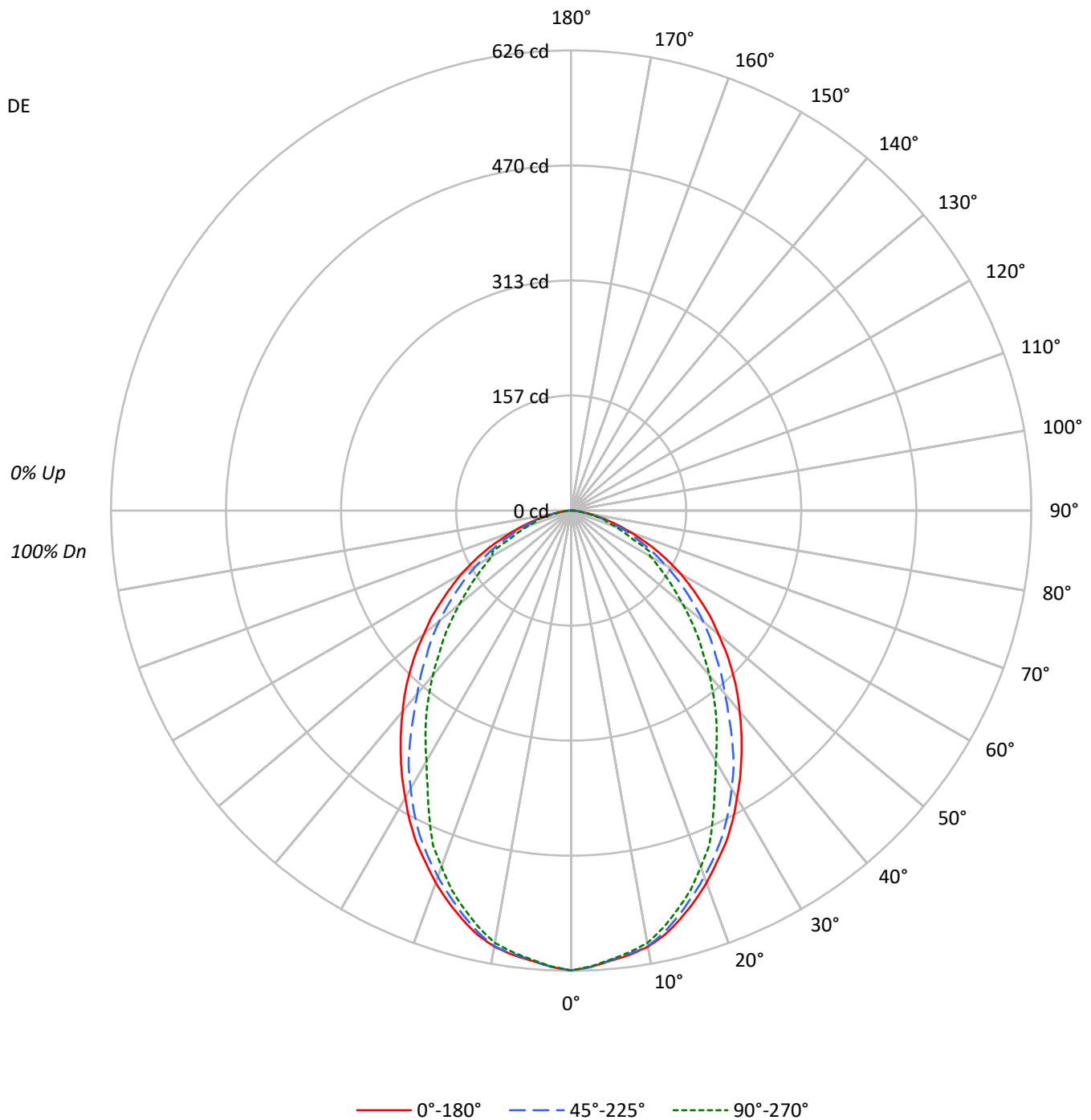
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3366	3366	3366
5°	3321	3317	3313
10°	3292	3288	3264
15°	3203	3171	3127
20°	3085	3036	2953
25°	2959	2894	2714
30°	2804	2715	2445
35°	2656	2508	2261
40°	2505	2286	2058
45°	2361	2114	1860
50°	2186	1962	1659
55°	2022	1778	1486
60°	1852	1588	1331
65°	1630	1391	1179
70°	1342	1218	1001
75°	1067	932	977
80°	716	673	626
85°	445	537	624

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2361 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.2	4.7
10°-20°	159.8	13.0
20°-30°	221.2	18.0
30°-40°	235.9	19.2
40°-50°	215.2	17.5
50°-60°	168.6	13.7
60°-70°	109.9	8.9
70°-80°	48.7	4.0
80°-90°	10.4	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°	439.3	35.8
0°-40°	675.2	55.0
0°-60°	1059.0	86.2
0°-90°	1228.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1228.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	626	626	626	626	626	
5°	615	614	614	613	613	58
15°	575	575	569	563	561	162
25°	498	495	487	470	457	229
35°	404	401	382	353	344	253
45°	310	304	278	254	244	239
55°	216	209	190	167	158	193
65°	128	121	109	111	93	126
75°	51	48	45	43	47	55
85°	7	8	9	9	10	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	625.5	625.5	625.5	625.5	625.5
2.5°	621.2	621.2	621.2	620.5	620.5
5°	614.7	614.0	614.0	613.2	613.2
7.5°	609.6	608.9	608.2	607.4	606.0
10°	602.4	602.4	601.7	598.0	597.3
12.5°	590.8	590.1	587.2	582.1	580.7
15°	574.9	574.9	569.1	563.3	561.2
17.5°	557.6	556.8	549.6	543.8	540.9
20°	538.7	537.3	530.1	520.7	515.6
22.5°	517.8	517.8	509.1	496.8	491.7
25°	498.3	495.4	487.4	470.0	457.0
27.5°	475.8	471.5	462.8	438.2	423.0
30°	451.2	449.1	436.8	405.0	393.4
32.5°	428.1	424.5	411.5	378.2	368.8
35°	404.2	401.3	381.8	352.9	344.2
37.5°	380.4	376.8	352.2	329.0	318.2
40°	356.5	352.2	325.4	304.4	292.9
42.5°	334.1	328.3	302.3	279.9	266.8
45°	310.2	303.7	277.7	254.5	244.4
47.5°	286.4	280.6	256.7	232.9	221.3
50°	261.1	256.0	234.3	210.4	198.1
52.5°	240.1	232.1	211.2	187.3	177.2
55°	215.5	209.0	189.5	167.0	158.4
57.5°	193.1	186.6	168.5	147.5	140.3
60°	172.1	162.7	147.5	129.4	123.7
62.5°	149.0	141.7	128.7	113.5	120.8
65°	128.0	120.8	109.2	111.4	92.6
67.5°	104.9	101.2	91.1	81.0	78.1
70°	85.3	81.0	77.4	66.5	63.6
72.5°	68.0	63.6	58.6	52.8	50.6
75°	51.3	47.7	44.8	42.7	47.0
77.5°	35.4	34.0	31.8	29.6	28.9
80°	23.1	22.4	21.7	21.0	20.2
82.5°	13.7	13.7	13.7	13.7	13.7
85°	7.2	8.0	8.7	9.4	10.1
87.5°	4.3	4.3	5.1	5.8	6.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)