

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: P563031

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563031
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-24-4-LD4-2STD-50-UNV-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6990.0 lumens
Efficiency: N/A
Efficacy: 105.0 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

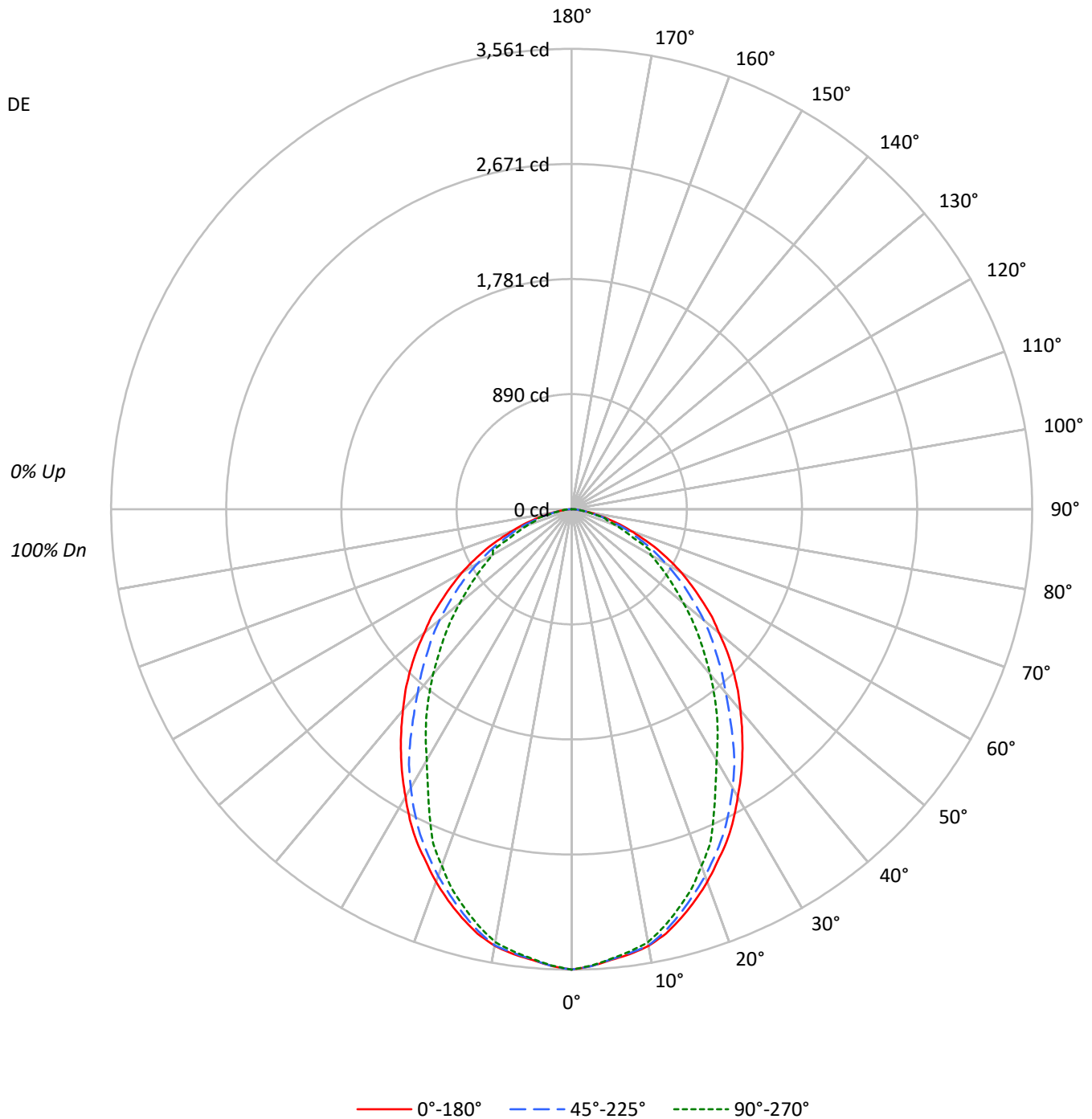
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563031

CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-82-87-EDD

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°	4791	4791	4791
5°	4726	4720	4715
10°	4685	4679	4645
15°	4558	4512	4450
20°	4391	4320	4202
25°	4210	4119	3862
30°	3991	3863	3479
35°	3779	3570	3218
40°	3564	3253	2928
45°	3360	3008	2647
50°	3111	2792	2361
55°	2878	2530	2115
60°	2636	2260	1894
65°	2320	1979	1677
70°	1911	1733	1425
75°	1520	1327	1391
80°	1020	957	893
85°	636	763	889

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3360 cd/sqm

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CATALOG NUMBER: FSR-24-4-LD4-2STD-50-UNV-82-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	331.4	4.7
10°-20°	909.6	13.0
20°-30°	1259.3	18.0
30°-40°	1342.8	19.2
40°-50°	1225.0	17.5
50°-60°	959.7	13.7
60°-70°	625.5	8.9
70°-80°	277.1	4.0
80°-90°	59.5	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°	2500.4	35.8
0°-40°	3843.2	55.0
0°-60°	6027.9	86.2
0°-90°	6990.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6990.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3561	3561	3561	3561	3561	
5°	3499	3495	3495	3491	3491	332
15°	3272	3272	3240	3207	3194	920
25°	2836	2820	2774	2676	2602	1302
35°	2301	2285	2173	2009	1959	1439
45°	1766	1729	1581	1449	1391	1360
55°	1227	1190	1078	951	902	1100
65°	729	687	622	634	527	718
75°	292	272	255	243	268	313
85°	41	45	49	54	58	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3560.6	3560.6	3560.6	3560.6	3560.6
2.5°	3535.9	3535.9	3535.9	3531.8	3531.8
5°	3498.9	3494.8	3494.8	3490.6	3490.6
7.5°	3470.1	3465.9	3461.8	3457.7	3449.5
10°	3428.9	3428.9	3424.8	3404.2	3400.1
12.5°	3363.0	3358.9	3342.4	3313.6	3305.4
15°	3272.5	3272.5	3239.5	3206.6	3194.3
17.5°	3173.7	3169.6	3128.4	3095.5	3079.0
20°	3066.7	3058.4	3017.3	2963.7	2934.9
22.5°	2947.3	2947.3	2897.9	2827.9	2799.1
25°	2836.1	2819.7	2774.4	2675.6	2601.5
27.5°	2708.5	2683.8	2634.4	2494.5	2408.0
30°	2568.6	2556.2	2486.3	2305.1	2239.3
32.5°	2436.9	2416.3	2342.2	2152.8	2099.3
35°	2301.0	2284.6	2173.4	2008.8	1959.4
37.5°	2165.2	2144.6	2004.6	1872.9	1811.2
40°	2029.3	2004.6	1852.3	1733.0	1667.1
42.5°	1901.7	1868.8	1720.6	1593.0	1518.9
45°	1765.9	1728.9	1580.7	1448.9	1391.3
47.5°	1630.1	1597.1	1461.3	1325.5	1259.6
50°	1486.0	1457.2	1333.7	1197.8	1127.9
52.5°	1366.6	1321.3	1202.0	1066.1	1008.5
55°	1226.7	1189.6	1078.5	950.9	901.5
57.5°	1099.1	1062.0	959.1	839.7	798.6
60°	979.7	926.2	839.7	736.8	703.9
62.5°	848.0	806.8	732.7	646.3	687.4
65°	728.6	687.4	621.6	633.9	526.9
67.5°	596.9	576.3	518.7	461.0	444.6
70°	485.7	461.0	440.4	378.7	362.2
72.5°	386.9	362.2	333.4	300.5	288.1
75°	292.3	271.7	255.2	242.9	267.6
77.5°	201.7	193.5	181.1	168.8	164.7
80°	131.7	127.6	123.5	119.4	115.3
82.5°	78.2	78.2	78.2	78.2	78.2
85°	41.2	45.3	49.4	53.5	57.6
87.5°	24.7	24.7	28.8	32.9	37.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)