

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: P562907

Luminaire Tested: FSR-24-4-LD4-2STD-35-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562907
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-35-UNV-82-94-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7275.0 lumens
Efficiency: N/A
Efficacy: 109.2 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

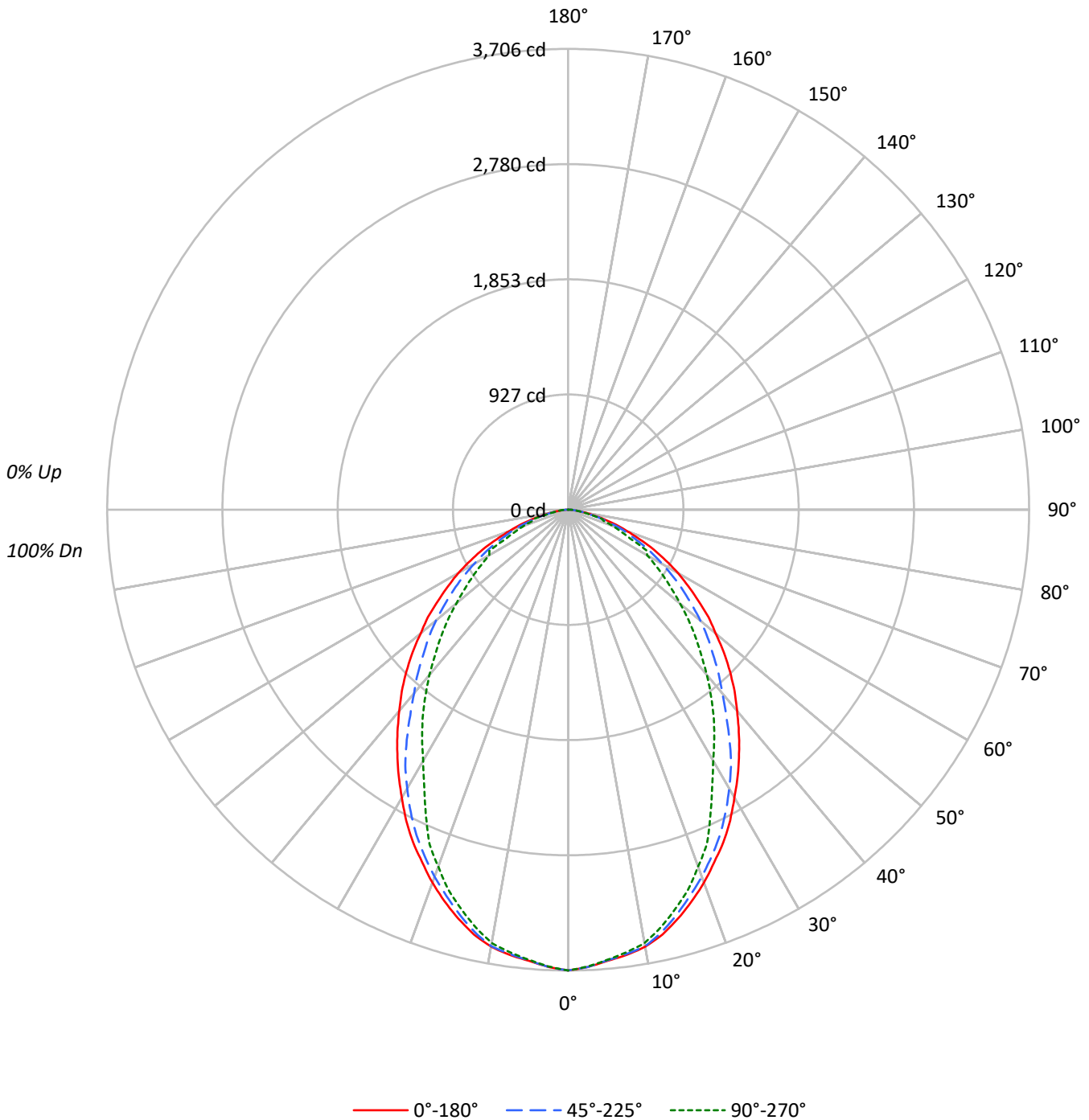
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4986	4986	4986
5°	4918	4913	4907
10°	4876	4870	4835
15°	4744	4696	4631
20°	4570	4496	4374
25°	4382	4287	4020
30°	4153	4020	3621
35°	3934	3715	3350
40°	3710	3386	3048
45°	3497	3130	2755
50°	3237	2906	2457
55°	2995	2633	2201
60°	2744	2352	1971
65°	2414	2060	1746
70°	1989	1803	1483
75°	1581	1381	1448
80°	1062	996	930
85°	661	794	926

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3497 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	345.0	4.7
10°-20°	946.7	13.0
20°-30°	1310.7	18.0
30°-40°	1397.5	19.2
40°-50°	1275.0	17.5
50°-60°	998.8	13.7
60°-70°	651.0	8.9
70°-80°	288.4	4.0
80°-90°	61.9	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°	2602.3	35.8
0°-40°	3999.9	55.0
0°-60°	6273.7	86.2
0°-90°	7275.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7275.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3706	3706	3706	3706	3706	
5°	3642	3637	3637	3633	3633	346
15°	3406	3406	3372	3337	3324	957
25°	2952	2935	2888	2785	2708	1355
35°	2395	2378	2262	2091	2039	1497
45°	1838	1799	1645	1508	1448	1416
55°	1277	1238	1122	990	938	1145
65°	758	716	647	660	548	747
75°	304	283	266	253	278	326
85°	43	47	51	56	60	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3705.8	3705.8	3705.8	3705.8	3705.8
2.5°	3680.1	3680.1	3680.1	3675.8	3675.8
5°	3641.5	3637.2	3637.2	3633.0	3633.0
7.5°	3611.5	3607.3	3603.0	3598.7	3590.1
10°	3568.7	3568.7	3564.4	3543.0	3538.7
12.5°	3500.1	3495.9	3478.7	3448.7	3440.2
15°	3405.9	3405.9	3371.6	3337.4	3324.5
17.5°	3303.1	3298.8	3256.0	3221.7	3204.5
20°	3191.7	3183.1	3140.3	3084.6	3054.6
22.5°	3067.4	3067.4	3016.0	2943.2	2913.2
25°	2951.8	2934.6	2887.5	2784.7	2707.6
27.5°	2819.0	2793.3	2741.9	2596.2	2506.2
30°	2673.3	2660.5	2587.6	2399.1	2330.6
32.5°	2536.2	2514.8	2437.7	2240.6	2184.9
35°	2394.8	2377.7	2262.0	2090.7	2039.3
37.5°	2253.5	2232.0	2086.4	1949.3	1885.0
40°	2112.1	2086.4	1927.9	1803.6	1735.1
42.5°	1979.3	1945.0	1790.8	1658.0	1580.9
45°	1837.9	1799.3	1645.1	1508.0	1448.0
47.5°	1696.5	1662.2	1520.9	1379.5	1310.9
50°	1546.6	1516.6	1388.1	1246.7	1173.9
52.5°	1422.3	1375.2	1251.0	1109.6	1049.6
55°	1276.7	1238.1	1122.4	989.6	938.2
57.5°	1143.9	1105.3	998.2	874.0	831.1
60°	1019.6	963.9	874.0	766.9	732.6
62.5°	882.5	839.7	762.6	672.6	715.5
65°	758.3	715.5	646.9	659.8	548.4
67.5°	621.2	599.8	539.8	479.8	462.7
70°	505.5	479.8	458.4	394.1	377.0
72.5°	402.7	377.0	347.0	312.7	299.9
75°	304.2	282.8	265.6	252.8	278.5
77.5°	209.9	201.4	188.5	175.7	171.4
80°	137.1	132.8	128.5	124.2	120.0
82.5°	81.4	81.4	81.4	81.4	81.4
85°	42.8	47.1	51.4	55.7	60.0
87.5°	25.7	25.7	30.0	34.3	38.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)