

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: P563027

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563027
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-82-85-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7307.0 lumens
Efficiency: N/A
Efficacy: 109.7 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

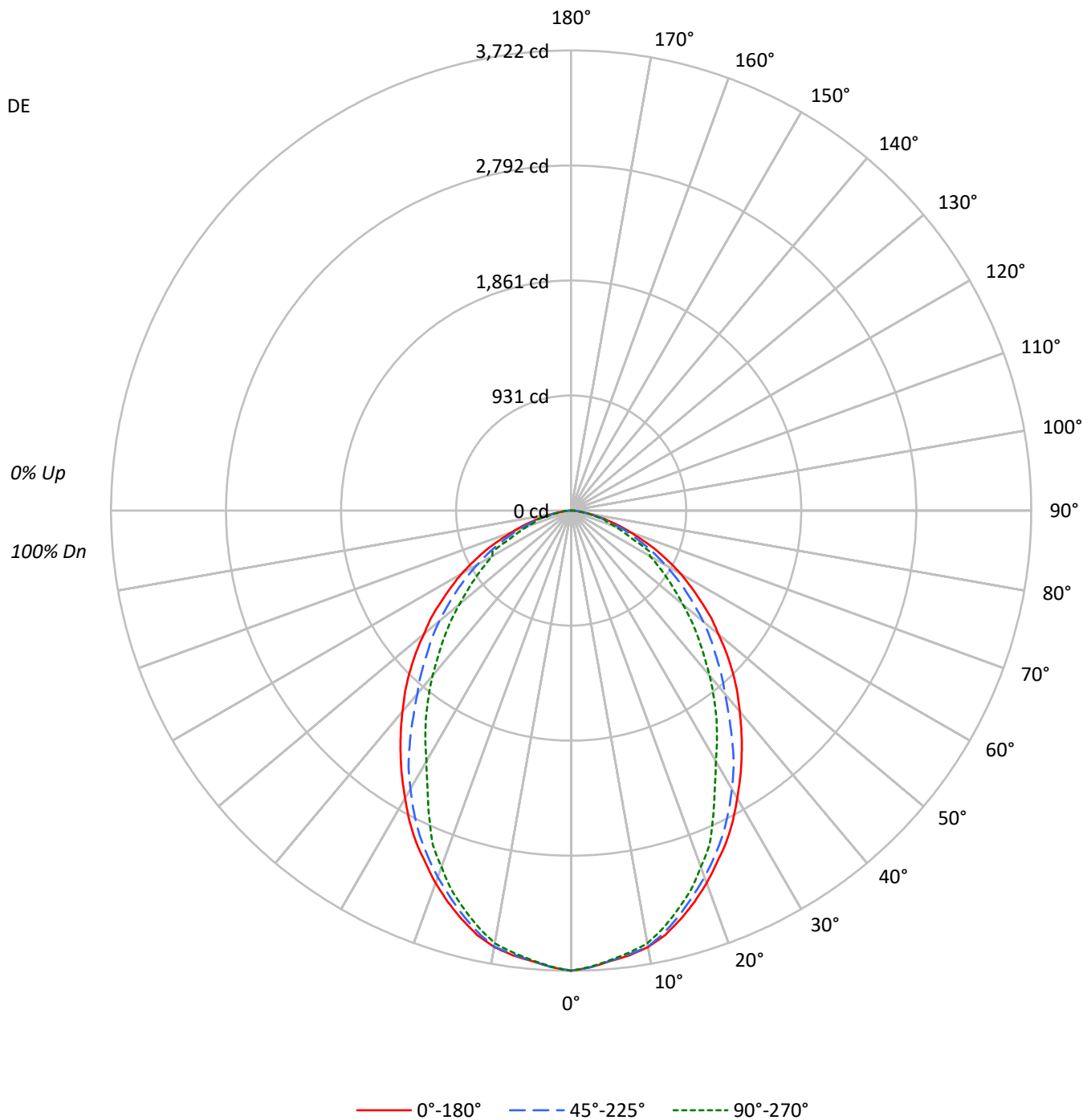
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	5008	5008	5008
5°	4940	4934	4928
10°	4897	4891	4856
15°	4765	4717	4651
20°	4590	4516	4393
25°	4401	4306	4037
30°	4172	4038	3637
35°	3951	3732	3364
40°	3726	3401	3061
45°	3513	3144	2767
50°	3252	2918	2468
55°	3008	2645	2211
60°	2756	2362	1980
65°	2425	2069	1754
70°	1998	1811	1490
75°	1588	1387	1454
80°	1067	1000	934
85°	664	797	929

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3513 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	346.5	4.7
10°-20°	950.9	13.0
20°-30°	1316.4	18.0
30°-40°	1403.7	19.2
40°-50°	1280.6	17.5
50°-60°	1003.2	13.7
60°-70°	653.9	8.9
70°-80°	289.7	4.0
80°-90°	62.2	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°	2613.8	35.8
0°-40°	4017.5	55.0
0°-60°	6301.3	86.2
0°-90°	7307.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7307.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3722	3722	3722	3722	3722	
5°	3658	3653	3653	3649	3649	347
15°	3421	3421	3386	3352	3339	962
25°	2965	2948	2900	2797	2720	1361
35°	2405	2388	2272	2100	2048	1504
45°	1846	1807	1652	1515	1454	1422
55°	1282	1244	1127	994	942	1150
65°	762	719	650	663	551	751
75°	306	284	267	254	280	327
85°	43	47	52	56	60	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3722.1	3722.1	3722.1	3722.1	3722.1
2.5°	3696.3	3696.3	3696.3	3692.0	3692.0
5°	3657.5	3653.2	3653.2	3648.9	3648.9
7.5°	3627.4	3623.1	3618.8	3614.5	3605.9
10°	3584.4	3584.4	3580.1	3558.6	3554.3
12.5°	3515.5	3511.2	3494.0	3463.9	3455.3
15°	3420.9	3420.9	3386.5	3352.0	3339.1
17.5°	3317.6	3313.3	3270.3	3235.9	3218.6
20°	3205.7	3197.1	3154.1	3098.2	3068.0
22.5°	3080.9	3080.9	3029.3	2956.2	2926.0
25°	2964.8	2947.5	2900.2	2796.9	2719.5
27.5°	2831.4	2805.6	2753.9	2607.6	2517.3
30°	2685.1	2672.2	2599.0	2409.7	2340.8
32.5°	2547.4	2525.9	2448.4	2250.5	2194.5
35°	2405.4	2388.2	2272.0	2099.9	2048.2
37.5°	2263.4	2241.9	2095.6	1957.9	1893.3
40°	2121.4	2095.6	1936.3	1811.6	1742.7
42.5°	1988.0	1953.6	1798.7	1665.3	1587.8
45°	1846.0	1807.3	1652.3	1514.7	1454.4
47.5°	1704.0	1669.6	1527.6	1385.6	1316.7
50°	1553.4	1523.3	1394.2	1252.2	1179.0
52.5°	1428.6	1381.3	1256.5	1114.5	1054.2
55°	1282.3	1243.6	1127.4	994.0	942.4
57.5°	1148.9	1110.2	1002.6	877.8	834.8
60°	1024.1	968.2	877.8	770.2	735.8
62.5°	886.4	843.4	765.9	675.6	718.6
65°	761.6	718.6	649.8	662.7	550.8
67.5°	623.9	602.4	542.2	481.9	464.7
70°	507.8	481.9	460.4	395.9	378.7
72.5°	404.5	378.7	348.5	314.1	301.2
75°	305.5	284.0	266.8	253.9	279.7
77.5°	210.8	202.2	189.3	176.4	172.1
80°	137.7	133.4	129.1	124.8	120.5
82.5°	81.8	81.8	81.8	81.8	81.8
85°	43.0	47.3	51.6	55.9	60.2
87.5°	25.8	25.8	30.1	34.4	38.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)