

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: P563011

Luminaire Tested: FSR-24-4-LD4-2STD-50-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563011
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-81-85-EDD
Description: 2X4 FSR TROFFER WITH .156 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: 7465.0 lumens
Efficiency: N/A
Efficacy: 112.1 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

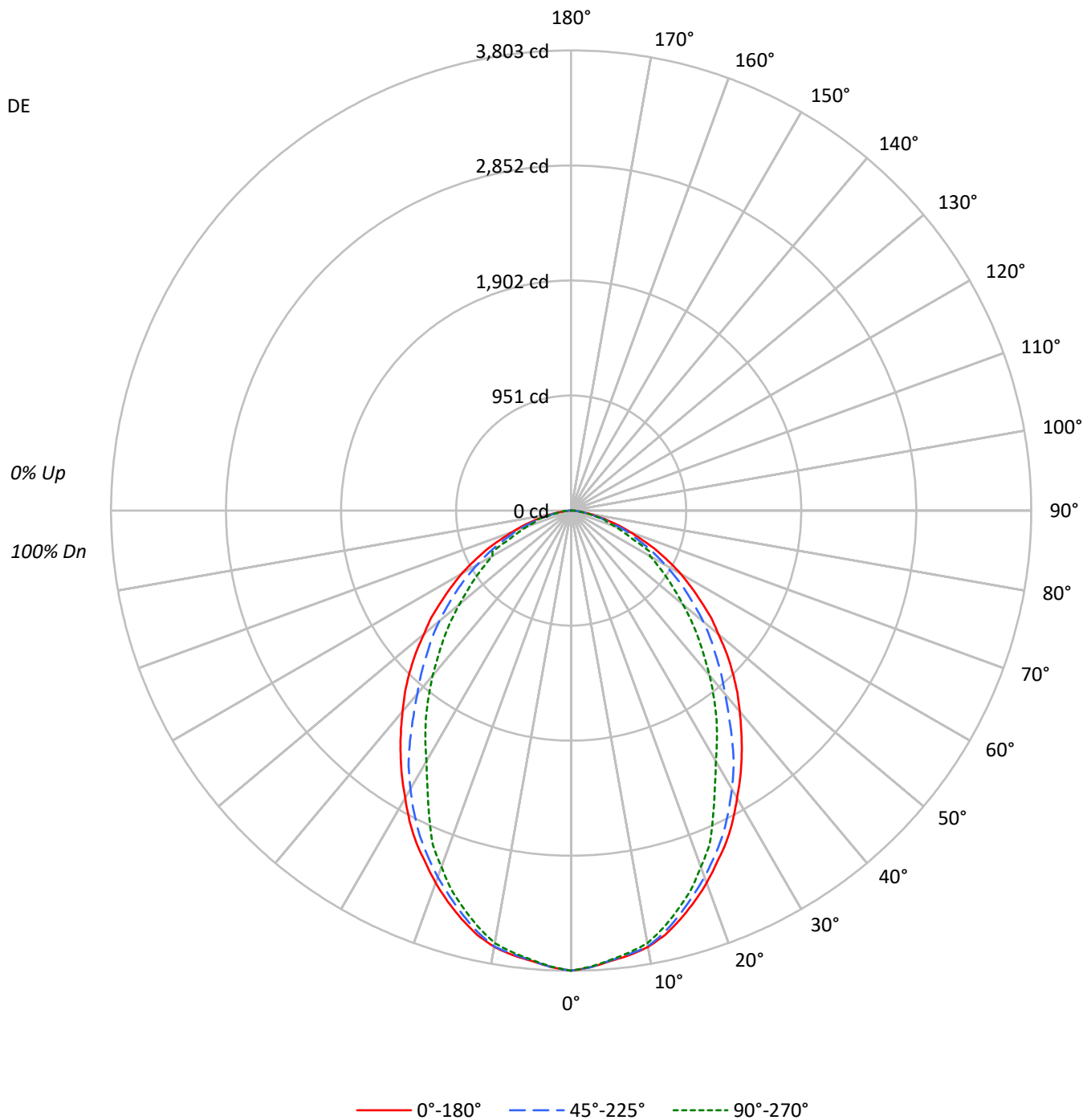
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5116	5116	5116
5°	5047	5041	5035
10°	5003	4997	4961
15°	4868	4819	4752
20°	4689	4614	4488
25°	4497	4399	4125
30°	4262	4125	3715
35°	4036	3812	3437
40°	3806	3475	3127
45°	3589	3212	2827
50°	3322	2981	2521
55°	3073	2702	2258
60°	2816	2413	2023
65°	2477	2113	1791
70°	2041	1851	1522
75°	1622	1417	1485
80°	1090	1022	954
85°	679	815	949

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3589 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	354.0	4.7
10°-20°	971.4	13.0
20°-30°	1344.9	18.0
30°-40°	1434.0	19.2
40°-50°	1308.3	17.5
50°-60°	1024.9	13.7
60°-70°	668.0	8.9
70°-80°	295.9	4.0
80°-90°	63.5	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°	2670.3	35.8
0°-40°	4104.3	55.0
0°-60°	6437.5	86.2
0°-90°	7465.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7465.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3803	3803	3803	3803	3803	
5°	3737	3732	3732	3728	3728	355
15°	3495	3495	3460	3424	3411	982
25°	3029	3011	2963	2857	2778	1391
35°	2457	2440	2321	2145	2092	1536
45°	1886	1846	1688	1547	1486	1453
55°	1310	1270	1152	1016	963	1175
65°	778	734	664	677	563	767
75°	312	290	273	259	286	334
85°	44	48	53	57	62	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3802.6	3802.6	3802.6	3802.6	3802.6
2.5°	3776.2	3776.2	3776.2	3771.8	3771.8
5°	3736.6	3732.2	3732.2	3727.8	3727.8
7.5°	3705.9	3701.5	3697.1	3692.7	3683.9
10°	3661.9	3661.9	3657.5	3635.5	3631.1
12.5°	3591.6	3587.2	3569.6	3538.8	3530.0
15°	3494.8	3494.8	3459.7	3424.5	3411.3
17.5°	3389.3	3384.9	3341.0	3305.8	3288.2
20°	3275.0	3266.3	3222.3	3165.1	3134.4
22.5°	3147.6	3147.6	3094.8	3020.1	2989.3
25°	3028.9	3011.3	2962.9	2857.4	2778.3
27.5°	2892.6	2866.2	2813.5	2664.0	2571.7
30°	2743.1	2729.9	2655.2	2461.8	2391.4
32.5°	2602.5	2580.5	2501.3	2299.1	2242.0
35°	2457.4	2439.8	2321.1	2145.3	2092.5
37.5°	2312.3	2290.3	2140.9	2000.2	1934.3
40°	2167.2	2140.9	1978.2	1850.7	1780.4
42.5°	2031.0	1995.8	1837.5	1701.3	1622.1
45°	1885.9	1846.3	1688.1	1547.4	1485.9
47.5°	1740.8	1705.7	1560.6	1415.5	1345.2
50°	1587.0	1556.2	1424.3	1279.2	1204.5
52.5°	1459.5	1411.1	1283.6	1138.6	1077.0
55°	1310.0	1270.5	1151.8	1015.5	962.7
57.5°	1173.7	1134.2	1024.3	896.8	852.8
60°	1046.3	989.1	896.8	786.9	751.7
62.5°	905.6	861.6	782.5	690.2	734.1
65°	778.1	734.1	663.8	677.0	562.7
67.5°	637.4	615.4	553.9	492.4	474.8
70°	518.7	492.4	470.4	404.4	386.9
72.5°	413.2	386.9	356.1	320.9	307.7
75°	312.1	290.1	272.6	259.4	285.7
77.5°	215.4	206.6	193.4	180.2	175.8
80°	140.7	136.3	131.9	127.5	123.1
82.5°	83.5	83.5	83.5	83.5	83.5
85°	44.0	48.4	52.8	57.1	61.5
87.5°	26.4	26.4	30.8	35.2	39.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)