

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: P563586

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-81-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563586
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-LD4-3STD-50-UNV-81-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9741.0 lumens
Efficiency: N/A
Efficacy: 97.5 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

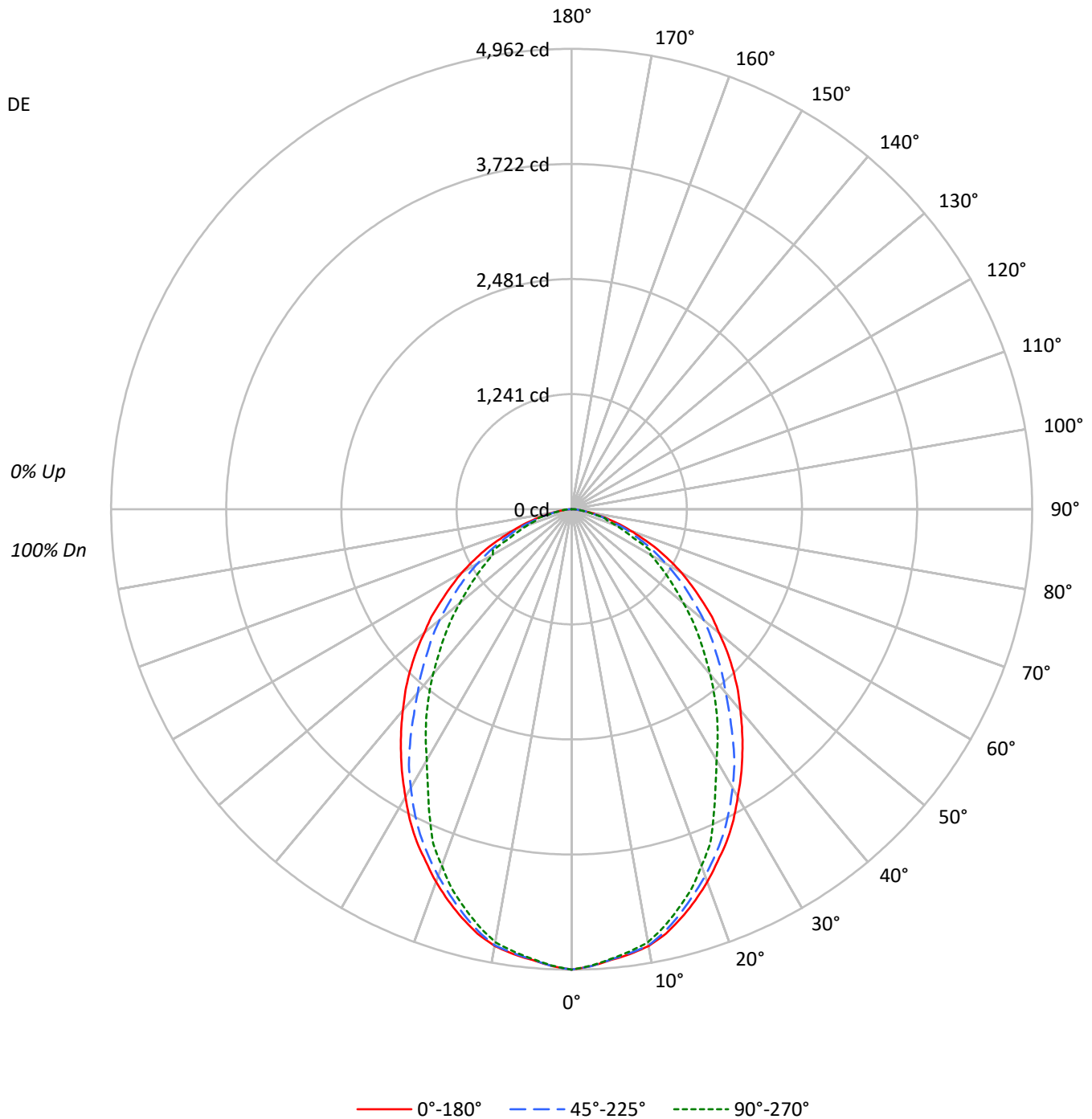
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6676	6676	6676
5°	6586	6578	6570
10°	6528	6521	6474
15°	6352	6288	6201
20°	6119	6020	5856
25°	5868	5740	5382
30°	5561	5383	4848
35°	5267	4975	4485
40°	4967	4534	4080
45°	4683	4192	3689
50°	4335	3890	3290
55°	4010	3525	2947
60°	3674	3149	2640
65°	3232	2758	2338
70°	2663	2415	1986
75°	2117	1849	1939
80°	1423	1333	1244
85°	886	1062	1240

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4683 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	461.9	4.7
10°-20°	1267.6	13.0
20°-30°	1754.9	18.0
30°-40°	1871.3	19.2
40°-50°	1707.1	17.5
50°-60°	1337.4	13.7
60°-70°	871.7	8.9
70°-80°	386.2	4.0
80°-90°	82.9	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°	3484.4	35.8
0°-40°	5355.7	55.0
0°-60°	8400.3	86.2
0°-90°	9741.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9741.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4962	4962	4962	4962	4962	
5°	4876	4870	4870	4864	4864	463
15°	4560	4560	4514	4469	4451	1282
25°	3952	3929	3866	3729	3625	1815
35°	3207	3184	3029	2799	2730	2005
45°	2461	2409	2203	2019	1939	1896
55°	1709	1658	1503	1325	1256	1533
65°	1015	958	866	883	734	1001
75°	407	379	356	338	373	437
85°	57	63	69	75	80	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4961.9	4961.9	4961.9	4961.9	4961.9
2.5°	4927.5	4927.5	4927.5	4921.8	4921.8
5°	4875.9	4870.2	4870.2	4864.4	4864.4
7.5°	4835.7	4830.0	4824.3	4818.5	4807.1
10°	4778.4	4778.4	4772.6	4744.0	4738.2
12.5°	4686.6	4680.9	4657.9	4617.8	4606.3
15°	4560.4	4560.4	4514.5	4468.6	4451.4
17.5°	4422.7	4417.0	4359.6	4313.7	4290.8
20°	4273.6	4262.1	4204.7	4130.2	4090.0
22.5°	4107.2	4107.2	4038.4	3940.9	3900.7
25°	3952.3	3929.4	3866.3	3728.6	3625.4
27.5°	3774.5	3740.1	3671.3	3476.2	3355.8
30°	3579.5	3562.3	3464.8	3212.4	3120.6
32.5°	3395.9	3367.2	3264.0	3000.1	2925.5
35°	3206.6	3183.7	3028.8	2799.3	2730.5
37.5°	3017.3	2988.6	2793.6	2610.0	2524.0
40°	2828.0	2793.6	2581.4	2415.0	2323.2
42.5°	2650.2	2604.3	2397.8	2220.0	2116.7
45°	2460.9	2409.3	2202.8	2019.2	1938.9
47.5°	2271.6	2225.7	2036.4	1847.1	1755.3
50°	2070.8	2030.7	1858.6	1669.3	1571.8
52.5°	1904.5	1841.4	1675.0	1485.7	1405.4
55°	1709.4	1657.8	1502.9	1325.1	1256.3
57.5°	1531.6	1480.0	1336.6	1170.2	1112.9
60°	1365.2	1290.7	1170.2	1026.8	980.9
62.5°	1181.7	1124.3	1021.1	900.6	958.0
65°	1015.3	958.0	866.2	883.4	734.3
67.5°	831.8	803.1	722.8	642.5	619.5
70°	676.9	642.5	613.8	527.7	504.8
72.5°	539.2	504.8	464.6	418.8	401.5
75°	407.3	378.6	355.7	338.4	372.9
77.5°	281.1	269.6	252.4	235.2	229.5
80°	183.6	177.8	172.1	166.4	160.6
82.5°	109.0	109.0	109.0	109.0	109.0
85°	57.4	63.1	68.8	74.6	80.3
87.5°	34.4	34.4	40.2	45.9	51.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)