

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: P563602

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-82-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563602
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-82-85-EDD-90
Description: 2X4 FSR TROFFER WITH .187 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: 9536.0 lumens
Efficiency: N/A
Efficacy: 95.5 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

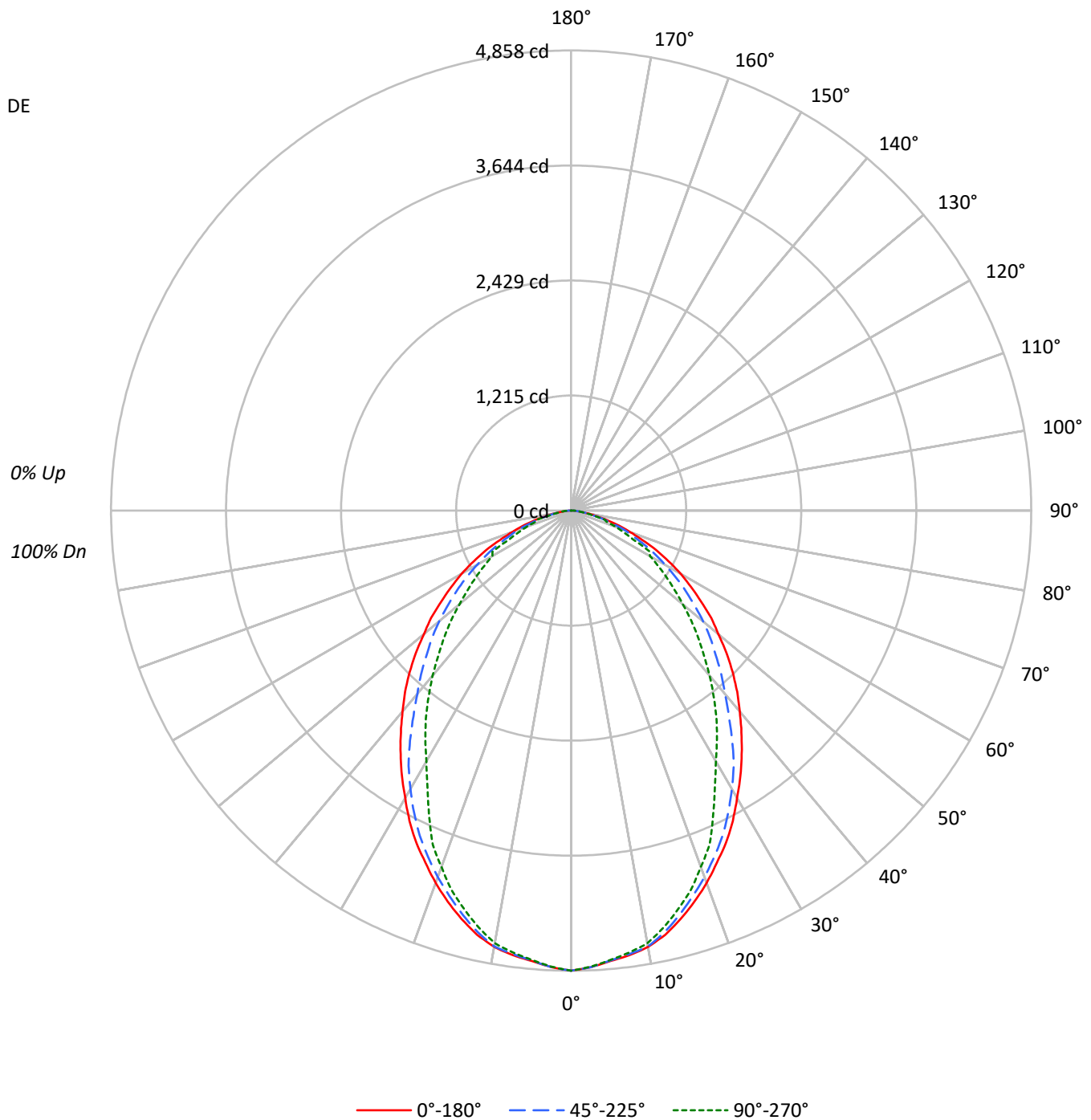
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563602

CATALOG NUMBER: FSR-24-4-LD4-3STD-50-UNV-82-85-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563602

CATALOG NUMBER: FSR-24-4-LD4-3STD-50-UNV-82-85-EDD-90

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°	6536	6536	6536
5°	6447	6439	6432
10°	6391	6383	6337
15°	6219	6156	6070
20°	5990	5894	5733
25°	5744	5619	5269
30°	5444	5270	4746
35°	5156	4870	4391
40°	4863	4438	3995
45°	4584	4103	3612
50°	4243	3809	3221
55°	3926	3451	2885
60°	3596	3083	2584
65°	3165	2700	2288
70°	2607	2364	1944
75°	2073	1810	1897
80°	1392	1306	1218
85°	868	1041	1213

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4584 cd/sqm



TEST NUMBER: P563602

CATALOG NUMBER: FSR-24-4-LD4-3STD-50-UNV-82-85-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	452.2	4.7
10°-20°	1240.9	13.0
20°-30°	1718.0	18.0
30°-40°	1831.9	19.2
40°-50°	1671.2	17.5
50°-60°	1309.3	13.7
60°-70°	853.3	8.9
70°-80°	378.1	4.0
80°-90°	81.2	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°	3411.1	35.8
0°-40°	5243.0	55.0
0°-60°	8223.4	86.2
0°-90°	9536.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9536.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4858	4858	4858	4858	4858	
5°	4773	4768	4768	4762	4762	453
15°	4464	4464	4420	4375	4358	1255
25°	3869	3847	3785	3650	3549	1776
35°	3139	3117	2965	2740	2673	1963
45°	2409	2359	2156	1977	1898	1856
55°	1674	1623	1471	1297	1230	1501
65°	994	938	848	865	719	980
75°	399	371	348	331	365	427
85°	56	62	67	73	79	78
90°	0	0	0	0	0	



TEST NUMBER: P563602

CATALOG NUMBER: FSR-24-4-LD4-3STD-50-UNV-82-85-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4857.5	4857.5	4857.5	4857.5	4857.5
2.5°	4823.8	4823.8	4823.8	4818.2	4818.2
5°	4773.3	4767.7	4767.7	4762.0	4762.0
7.5°	4734.0	4728.4	4722.7	4717.1	4705.9
10°	4677.8	4677.8	4672.2	4644.1	4638.5
12.5°	4588.0	4582.3	4559.9	4520.6	4509.3
15°	4464.4	4464.4	4419.5	4374.6	4357.7
17.5°	4329.6	4324.0	4267.9	4222.9	4200.5
20°	4183.6	4172.4	4116.2	4043.2	4003.9
22.5°	4020.8	4020.8	3953.4	3857.9	3818.6
25°	3869.2	3846.7	3784.9	3650.2	3549.1
27.5°	3695.1	3661.4	3594.0	3403.1	3285.1
30°	3504.1	3487.3	3391.8	3144.7	3054.9
32.5°	3324.4	3296.4	3195.3	2937.0	2864.0
35°	3139.1	3116.7	2965.0	2740.4	2673.0
37.5°	2953.8	2925.7	2734.8	2555.1	2470.9
40°	2768.5	2734.8	2527.0	2364.2	2274.3
42.5°	2594.4	2549.5	2347.3	2173.2	2072.2
45°	2409.1	2358.6	2156.4	1976.7	1898.1
47.5°	2223.8	2178.9	1993.5	1808.2	1718.4
50°	2027.2	1987.9	1819.5	1634.1	1538.7
52.5°	1864.4	1802.6	1639.8	1454.4	1375.8
55°	1673.5	1622.9	1471.3	1297.2	1229.8
57.5°	1499.4	1448.8	1308.4	1145.6	1089.4
60°	1336.5	1263.5	1145.6	1005.2	960.3
62.5°	1156.8	1100.7	999.6	881.7	937.8
65°	994.0	937.8	848.0	864.8	718.8
67.5°	814.3	786.2	707.6	628.9	606.5
70°	662.6	628.9	600.9	516.6	494.2
72.5°	527.9	494.2	454.9	409.9	393.1
75°	398.7	370.6	348.2	331.3	365.0
77.5°	275.2	263.9	247.1	230.2	224.6
80°	179.7	174.1	168.5	162.9	157.2
82.5°	106.7	106.7	106.7	106.7	106.7
85°	56.2	61.8	67.4	73.0	78.6
87.5°	33.7	33.7	39.3	44.9	50.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)