

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: P563458

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-81-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563458
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9121.0 lumens
Efficiency: N/A
Efficacy: 91.3 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

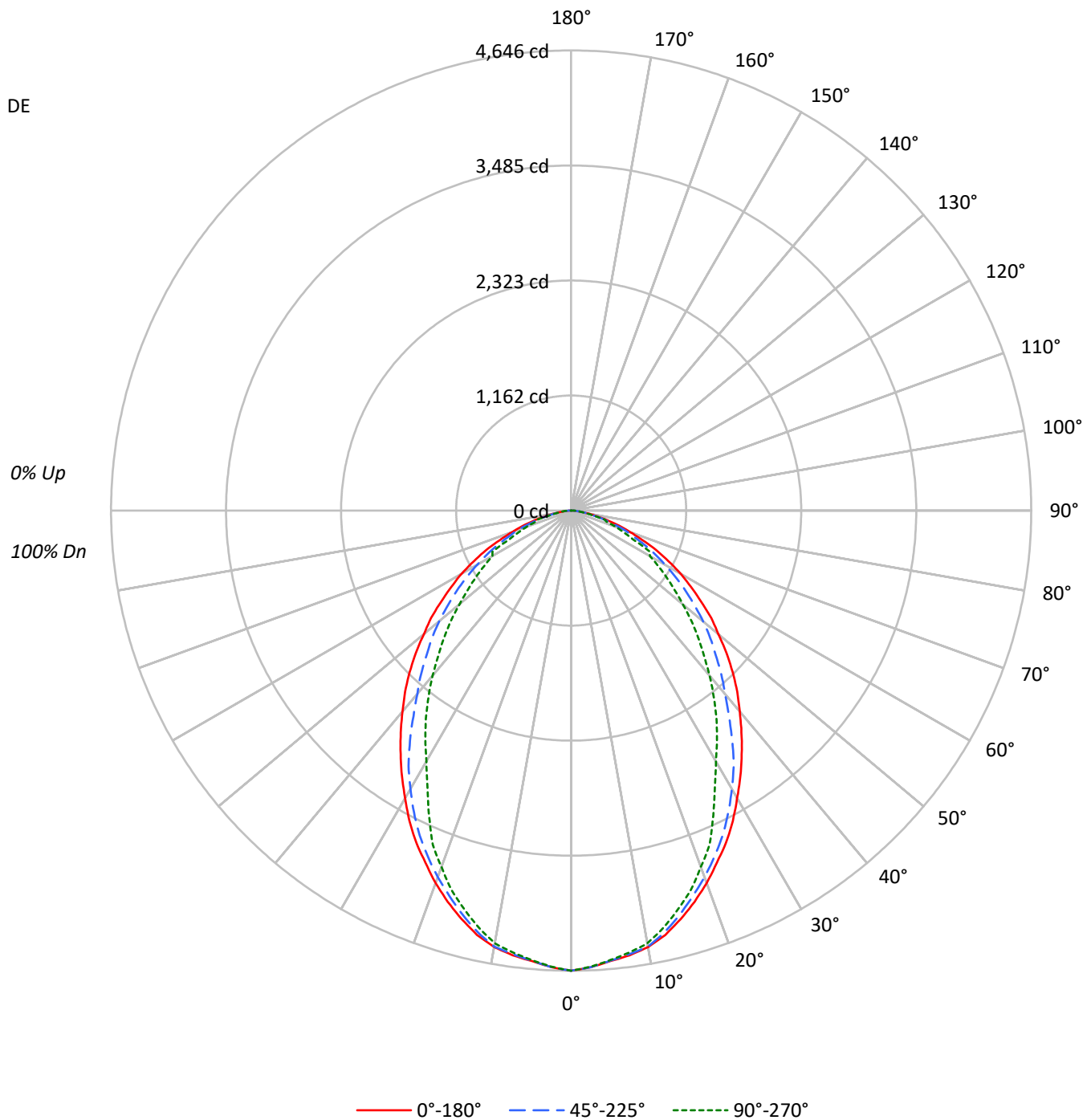
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563458

CATALOG NUMBER: FSR-24-4-LD4-3STD-35-UNV-81-85-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563458

CATALOG NUMBER: FSR-24-4-LD4-3STD-35-UNV-81-85-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	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°	6251	6251	6251
5°	6166	6159	6152
10°	6113	6106	6061
15°	5948	5888	5806
20°	5730	5637	5484
25°	5494	5374	5040
30°	5207	5040	4540
35°	4932	4658	4199
40°	4651	4245	3821
45°	4385	3925	3455
50°	4059	3643	3081
55°	3755	3301	2759
60°	3440	2949	2472
65°	3027	2582	2189
70°	2493	2261	1860
75°	1983	1731	1815
80°	1332	1248	1165
85°	829	996	1161

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4385 cd/sqm



TEST NUMBER: P563458

CATALOG NUMBER: FSR-24-4-LD4-3STD-35-UNV-81-85-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	432.5	4.7
10°-20°	1186.9	13.0
20°-30°	1643.2	18.0
30°-40°	1752.2	19.2
40°-50°	1598.5	17.5
50°-60°	1252.3	13.7
60°-70°	816.2	8.9
70°-80°	361.6	4.0
80°-90°	77.6	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°	3262.7	35.8
0°-40°	5014.8	55.0
0°-60°	7865.6	86.2
0°-90°	9121.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9121.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4646	4646	4646	4646	4646	
5°	4566	4560	4560	4555	4555	433
15°	4270	4270	4227	4184	4168	1200
25°	3701	3679	3620	3491	3395	1699
35°	3002	2981	2836	2621	2557	1877
45°	2304	2256	2063	1891	1816	1775
55°	1601	1552	1407	1241	1176	1436
65°	951	897	811	827	688	937
75°	381	354	333	317	349	409
85°	54	59	64	70	75	75
90°	0	0	0	0	0	

TEST NUMBER: P563458

CATALOG NUMBER: FSR-24-4-LD4-3STD-35-UNV-81-85-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4646.1	4646.1	4646.1	4646.1	4646.1
2.5°	4613.9	4613.9	4613.9	4608.5	4608.5
5°	4565.5	4560.2	4560.2	4554.8	4554.8
7.5°	4527.9	4522.6	4517.2	4511.8	4501.1
10°	4474.2	4474.2	4468.9	4442.0	4436.6
12.5°	4388.3	4382.9	4361.4	4323.8	4313.1
15°	4270.1	4270.1	4227.2	4184.2	4168.1
17.5°	4141.2	4135.8	4082.1	4039.2	4017.7
20°	4001.6	3990.8	3937.1	3867.3	3829.7
22.5°	3845.8	3845.8	3781.3	3690.0	3652.4
25°	3700.8	3679.3	3620.2	3491.3	3394.6
27.5°	3534.3	3502.0	3437.6	3255.0	3142.2
30°	3351.6	3335.5	3244.2	3007.9	2922.0
32.5°	3179.8	3152.9	3056.2	2809.2	2739.3
35°	3002.5	2981.0	2836.0	2621.2	2556.7
37.5°	2825.3	2798.4	2615.8	2443.9	2363.3
40°	2648.0	2615.8	2417.1	2261.3	2175.3
42.5°	2481.5	2438.5	2245.2	2078.7	1982.0
45°	2304.3	2255.9	2062.6	1890.7	1815.5
47.5°	2127.0	2084.0	1906.8	1729.5	1643.6
50°	1939.0	1901.4	1740.3	1563.0	1471.7
52.5°	1783.2	1724.2	1568.4	1391.1	1316.0
55°	1600.6	1552.3	1407.3	1240.8	1176.3
57.5°	1434.1	1385.8	1251.5	1095.7	1042.0
60°	1278.4	1208.5	1095.7	961.5	918.5
62.5°	1106.5	1052.8	956.1	843.3	897.0
65°	950.7	897.0	811.1	827.2	687.5
67.5°	778.8	752.0	676.8	601.6	580.1
70°	633.8	601.6	574.7	494.2	472.7
72.5°	504.9	472.7	435.1	392.1	376.0
75°	381.4	354.5	333.0	316.9	349.1
77.5°	263.2	252.4	236.3	220.2	214.8
80°	171.9	166.5	161.1	155.8	150.4
82.5°	102.1	102.1	102.1	102.1	102.1
85°	53.7	59.1	64.5	69.8	75.2
87.5°	32.2	32.2	37.6	43.0	48.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)