

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: P563801

Luminaire Tested: FSR-24-4-LD4-4HI-50-UNV-82-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563801
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-LD4-4HI-50-UNV-82-88-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15443.0 lumens
Efficiency: N/A
Efficacy: 89.4 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

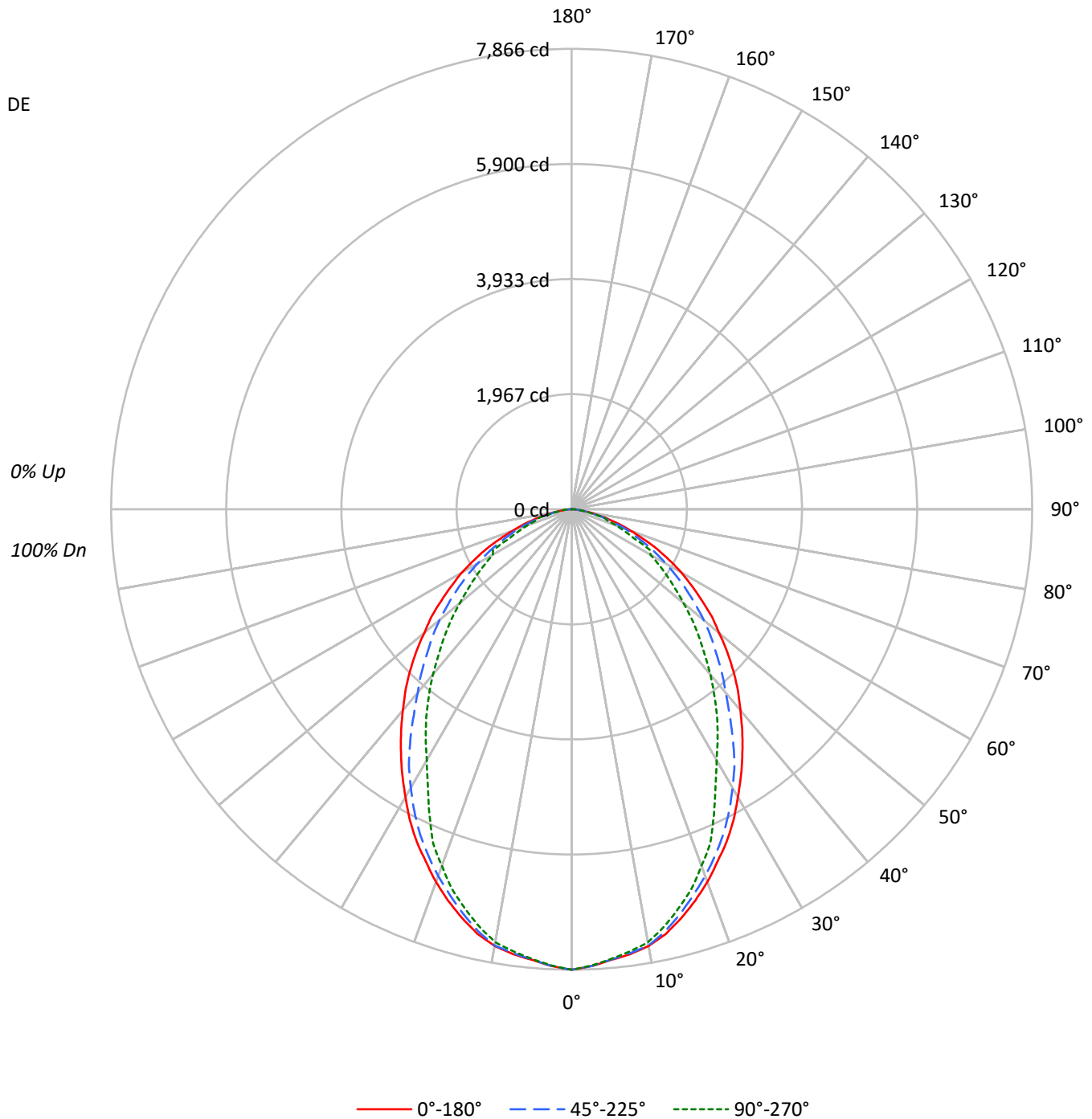
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10584	10584	10584
5°	10440	10428	10416
10°	10350	10338	10263
15°	10071	9970	9830
20°	9701	9545	9284
25°	9302	9100	8533
30°	8817	8534	7686
35°	8350	7887	7110
40°	7875	7188	6469
45°	7424	6645	5849
50°	6872	6168	5216
55°	6357	5589	4672
60°	5824	4992	4185
65°	5125	4372	3706
70°	4222	3828	3148
75°	3357	2931	3073
80°	2255	2114	1973
85°	1403	1684	1965

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7424 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	732.3	4.7
10°-20°	2009.6	13.0
20°-30°	2782.2	18.0
30°-40°	2966.6	19.2
40°-50°	2706.4	17.5
50°-60°	2120.3	13.7
60°-70°	1381.9	8.9
70°-80°	612.2	4.0
80°-90°	131.4	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°	5524.1	35.8
0°-40°	8490.7	55.0
0°-60°	13317.4	86.2
0°-90°	15443.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15443.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7866	7866	7866	7866	7866	
5°	7730	7721	7721	7712	7712	734
15°	7230	7230	7157	7084	7057	2033
25°	6266	6230	6130	5911	5748	2877
35°	5084	5047	4802	4438	4329	3178
45°	3901	3820	3492	3201	3074	3005
55°	2710	2628	2383	2101	1992	2431
65°	1610	1519	1373	1400	1164	1586
75°	646	600	564	537	591	692
85°	91	100	109	118	127	126
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7866.5	7866.5	7866.5	7866.5	7866.5
2.5°	7811.9	7811.9	7811.9	7802.8	7802.8
5°	7730.0	7721.0	7721.0	7711.9	7711.9
7.5°	7666.4	7657.3	7648.2	7639.1	7620.9
10°	7575.4	7575.4	7566.4	7520.9	7511.8
12.5°	7429.9	7420.8	7384.5	7320.8	7302.6
15°	7229.9	7229.9	7157.1	7084.4	7057.1
17.5°	7011.6	7002.5	6911.6	6838.8	6802.4
20°	6775.2	6757.0	6666.0	6547.8	6484.1
22.5°	6511.4	6511.4	6402.3	6247.7	6184.0
25°	6265.9	6229.5	6129.5	5911.2	5747.5
27.5°	5984.0	5929.4	5820.3	5511.1	5320.1
30°	5674.8	5647.5	5492.9	5092.7	4947.2
32.5°	5383.7	5338.3	5174.6	4756.3	4638.0
35°	5083.6	5047.3	4801.7	4438.0	4328.8
37.5°	4783.5	4738.1	4428.9	4137.8	4001.4
40°	4483.4	4428.9	4092.4	3828.6	3683.1
42.5°	4201.5	4128.8	3801.4	3519.4	3355.7
45°	3901.4	3819.6	3492.2	3201.1	3073.8
47.5°	3601.3	3528.5	3228.4	2928.3	2782.8
50°	3283.0	3219.3	2946.5	2646.4	2491.8
52.5°	3019.3	2919.2	2655.5	2355.4	2228.1
55°	2710.1	2628.2	2382.7	2100.8	1991.6
57.5°	2428.1	2346.3	2118.9	1855.2	1764.3
60°	2164.4	2046.2	1855.2	1627.9	1555.1
62.5°	1873.4	1782.5	1618.8	1427.8	1518.7
65°	1609.7	1518.7	1373.2	1400.5	1164.1
67.5°	1318.7	1273.2	1145.9	1018.5	982.2
70°	1073.1	1018.5	973.1	836.7	800.3
72.5°	854.9	800.3	736.6	663.9	636.6
75°	645.7	600.2	563.8	536.6	591.1
77.5°	445.6	427.4	400.1	372.9	363.8
80°	291.0	281.9	272.8	263.7	254.6
82.5°	172.8	172.8	172.8	172.8	172.8
85°	90.9	100.0	109.1	118.2	127.3
87.5°	54.6	54.6	63.7	72.8	81.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)