

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: P562513

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-82-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562513
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-LD4-2HI-35-UNV-82-84-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8903.0 lumens
Efficiency: N/A
Efficacy: 103.0 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

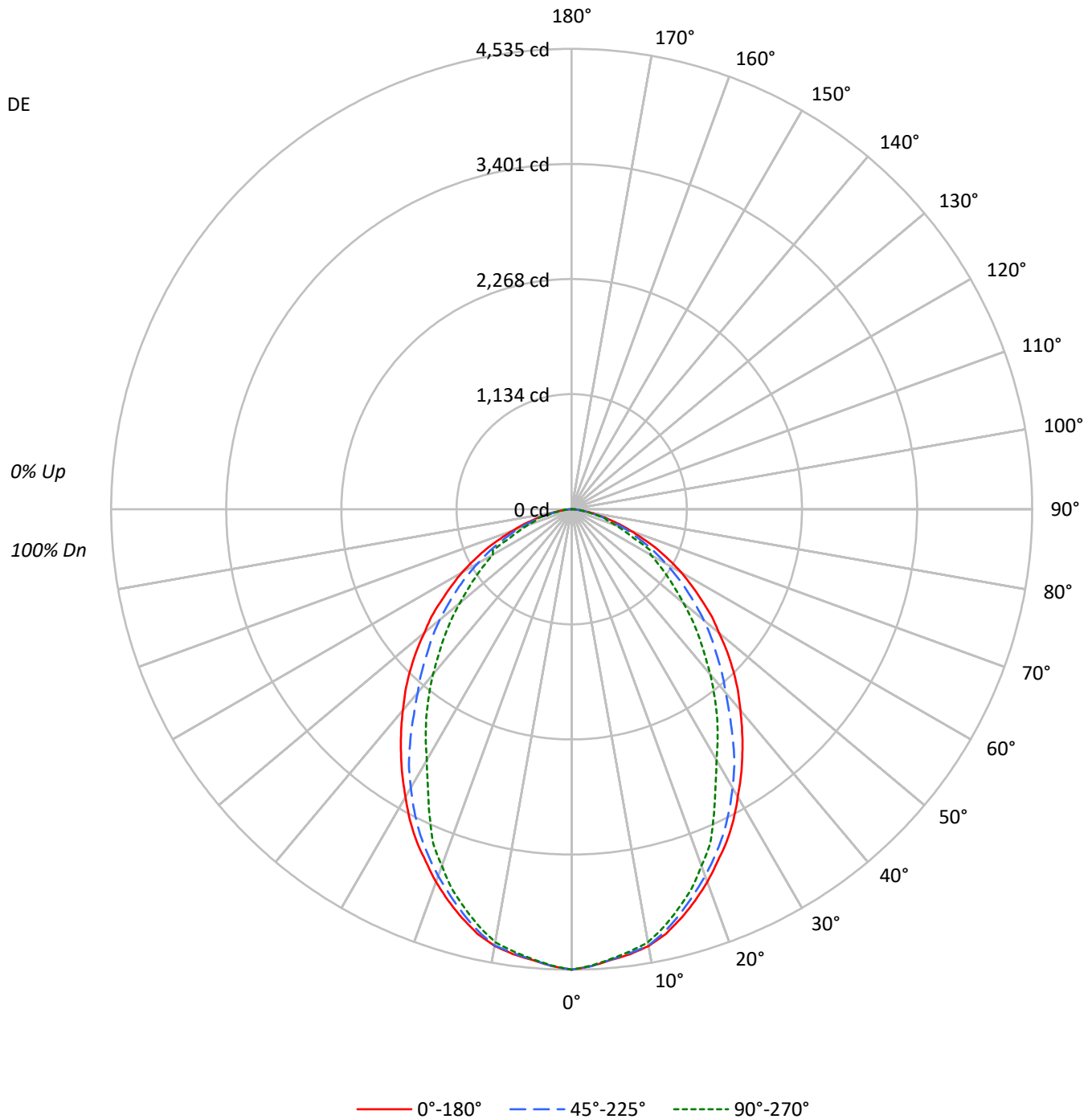
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6102	6102	6102
5°	6019	6012	6005
10°	5967	5960	5917
15°	5806	5747	5667
20°	5593	5503	5353
25°	5363	5246	4919
30°	5083	4920	4431
35°	4814	4547	4099
40°	4540	4144	3730
45°	4280	3831	3372
50°	3962	3556	3007
55°	3665	3222	2693
60°	3358	2878	2412
65°	2954	2521	2137
70°	2434	2207	1815
75°	1935	1690	1772
80°	1300	1219	1137
85°	809	971	1133

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4280 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	422.2	4.7
10°-20°	1158.6	13.0
20°-30°	1604.0	18.0
30°-40°	1710.3	19.2
40°-50°	1560.3	17.5
50°-60°	1222.4	13.7
60°-70°	796.7	8.9
70°-80°	353.0	4.0
80°-90°	75.8	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°	3184.7	35.8
0°-40°	4895.0	55.0
0°-60°	7677.6	86.2
0°-90°	8903.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8903.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4535	4535	4535	4535	4535	
5°	4456	4451	4451	4446	4446	423
15°	4168	4168	4126	4084	4068	1172
25°	3612	3591	3534	3408	3314	1658
35°	2931	2910	2768	2558	2496	1832
45°	2249	2202	2013	1846	1772	1733
55°	1562	1515	1374	1211	1148	1401
65°	928	876	792	807	671	915
75°	372	346	325	309	341	399
85°	52	58	63	68	73	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4535.1	4535.1	4535.1	4535.1	4535.1
2.5°	4503.6	4503.6	4503.6	4498.4	4498.4
5°	4456.4	4451.2	4451.2	4445.9	4445.9
7.5°	4419.7	4414.5	4409.2	4404.0	4393.5
10°	4367.3	4367.3	4362.1	4335.8	4330.6
12.5°	4283.4	4278.2	4257.2	4220.5	4210.0
15°	4168.1	4168.1	4126.1	4084.2	4068.5
17.5°	4042.2	4037.0	3984.6	3942.6	3921.7
20°	3905.9	3895.4	3843.0	3774.9	3738.2
22.5°	3753.9	3753.9	3691.0	3601.8	3565.1
25°	3612.3	3591.4	3533.7	3407.9	3313.5
27.5°	3449.8	3418.3	3355.4	3177.2	3067.1
30°	3271.5	3255.8	3166.7	2936.0	2852.1
32.5°	3103.8	3077.6	2983.2	2742.0	2673.9
35°	2930.8	2909.8	2768.2	2558.5	2495.6
37.5°	2757.7	2731.5	2553.3	2385.5	2306.9
40°	2584.7	2553.3	2359.3	2207.2	2123.4
42.5°	2422.2	2380.3	2191.5	2029.0	1934.6
45°	2249.2	2202.0	2013.3	1845.5	1772.1
47.5°	2076.2	2034.2	1861.2	1688.2	1604.3
50°	1892.7	1856.0	1698.7	1525.7	1436.5
52.5°	1740.6	1683.0	1530.9	1357.9	1284.5
55°	1562.4	1515.2	1373.6	1211.1	1148.2
57.5°	1399.8	1352.7	1221.6	1069.5	1017.1
60°	1247.8	1179.6	1069.5	938.5	896.5
62.5°	1080.0	1027.6	933.2	823.1	875.6
65°	928.0	875.6	791.7	807.4	671.1
67.5°	760.2	734.0	660.6	587.2	566.2
70°	618.7	587.2	561.0	482.3	461.4
72.5°	492.8	461.4	424.7	382.7	367.0
75°	372.2	346.0	325.1	309.3	340.8
77.5°	256.9	246.4	230.7	215.0	209.7
80°	167.8	162.5	157.3	152.0	146.8
82.5°	99.6	99.6	99.6	99.6	99.6
85°	52.4	57.7	62.9	68.2	73.4
87.5°	31.5	31.5	36.7	41.9	47.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)