

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: P562617

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-80-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562617
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-50-UNV-80-88-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8303.0 lumens
Efficiency: N/A
Efficacy: 96.1 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

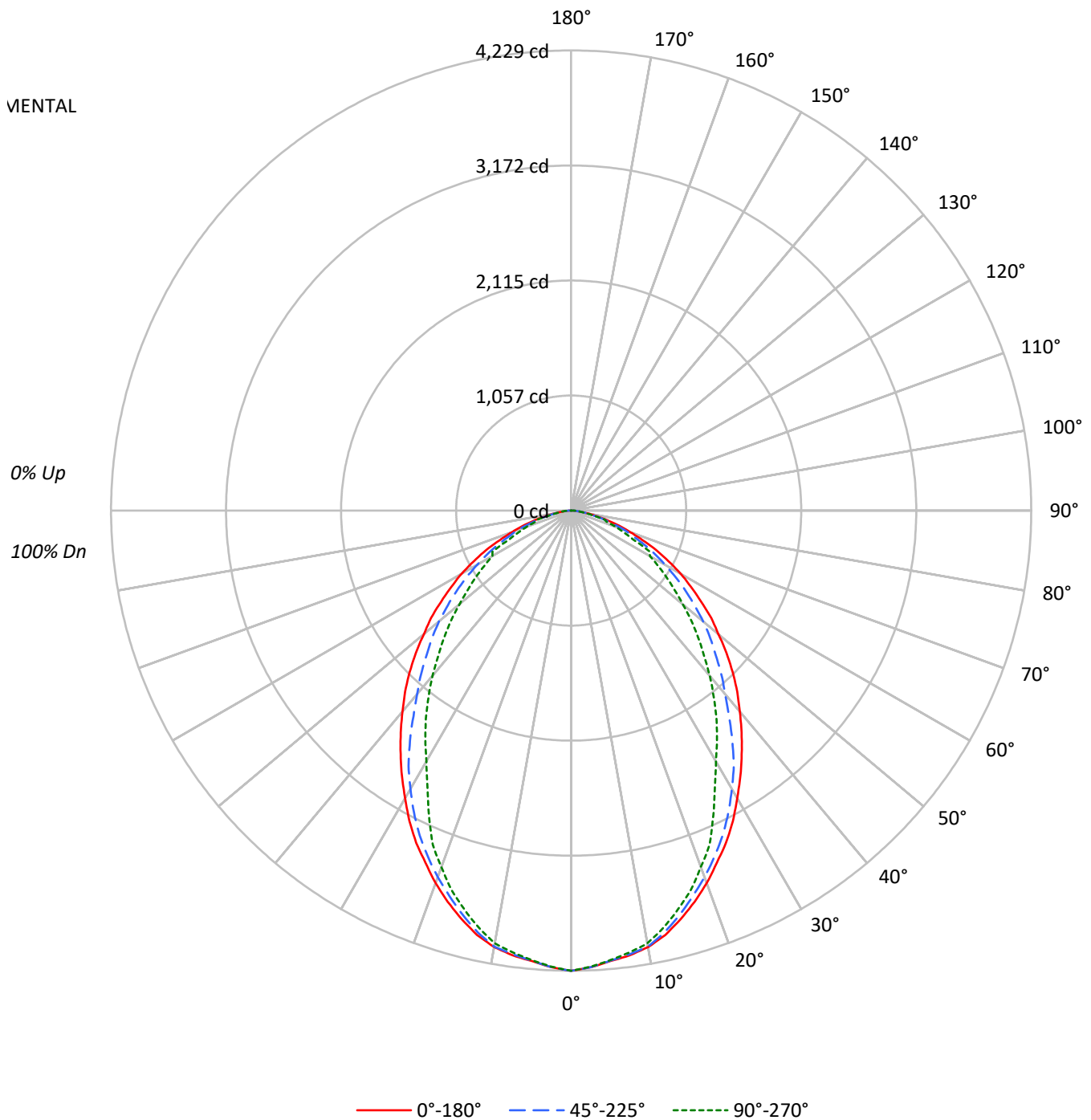
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87				87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75				75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65				65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56				56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50				50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44				44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40				40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36				36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33				33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30				30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5691	5691	5691
5°	5613	5607	5600
10°	5565	5558	5518
15°	5415	5360	5285
20°	5216	5132	4992
25°	5001	4892	4588
30°	4740	4588	4133
35°	4489	4241	3823
40°	4234	3865	3478
45°	3991	3573	3145
50°	3695	3316	2804
55°	3418	3005	2512
60°	3131	2684	2250
65°	2755	2351	1993
70°	2270	2058	1693
75°	1805	1576	1652
80°	1213	1137	1061
85°	755	906	1057

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3991 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	393.7	4.7
10°-20°	1080.5	13.0
20°-30°	1495.9	18.0
30°-40°	1595.0	19.2
40°-50°	1455.1	17.5
50°-60°	1140.0	13.7
60°-70°	743.0	8.9
70°-80°	329.2	4.0
80°-90°	70.7	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°	2970.1	35.8
0°-40°	4565.1	55.0
0°-60°	7160.2	86.2
0°-90°	8303.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8303.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4229	4229	4229	4229	4229	
5°	4156	4151	4151	4146	4146	395
15°	3887	3887	3848	3809	3794	1093
25°	3369	3349	3296	3178	3090	1547
35°	2733	2714	2582	2386	2327	1709
45°	2098	2054	1878	1721	1653	1616
55°	1457	1413	1281	1130	1071	1307
65°	865	817	738	753	626	853
75°	347	323	303	288	318	372
85°	49	54	59	64	68	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4229.4	4229.4	4229.4	4229.4	4229.4
2.5°	4200.1	4200.1	4200.1	4195.2	4195.2
5°	4156.1	4151.2	4151.2	4146.3	4146.3
7.5°	4121.9	4117.0	4112.1	4107.2	4097.4
10°	4073.0	4073.0	4068.1	4043.6	4038.7
12.5°	3994.7	3989.9	3970.3	3936.1	3926.3
15°	3887.2	3887.2	3848.1	3808.9	3794.3
17.5°	3769.8	3764.9	3716.0	3676.9	3657.4
20°	3642.7	3632.9	3584.0	3520.5	3486.2
22.5°	3500.9	3500.9	3442.2	3359.1	3324.9
25°	3368.9	3349.3	3295.5	3178.2	3090.2
27.5°	3217.3	3188.0	3129.3	2963.1	2860.4
30°	3051.1	3036.4	2953.3	2738.1	2659.9
32.5°	2894.6	2870.1	2782.1	2557.2	2493.7
35°	2733.2	2713.7	2581.7	2386.1	2327.4
37.5°	2571.9	2547.4	2381.2	2224.7	2151.4
40°	2410.5	2381.2	2200.3	2058.5	1980.3
42.5°	2259.0	2219.8	2043.8	1892.2	1804.2
45°	2097.6	2053.6	1877.6	1721.1	1652.7
47.5°	1936.3	1897.1	1735.8	1574.4	1496.2
50°	1765.1	1730.9	1584.2	1422.9	1339.7
52.5°	1623.3	1569.5	1427.7	1266.4	1197.9
55°	1457.1	1413.1	1281.1	1129.5	1070.8
57.5°	1305.5	1261.5	1139.3	997.5	948.6
60°	1163.7	1100.1	997.5	875.2	836.1
62.5°	1007.2	958.3	870.3	767.7	816.6
65°	865.4	816.6	738.3	753.0	625.9
67.5°	709.0	684.5	616.1	547.6	528.1
70°	577.0	547.6	523.2	449.8	430.3
72.5°	459.6	430.3	396.1	356.9	342.3
75°	347.2	322.7	303.2	288.5	317.8
77.5°	239.6	229.8	215.1	200.5	195.6
80°	156.5	151.6	146.7	141.8	136.9
82.5°	92.9	92.9	92.9	92.9	92.9
85°	48.9	53.8	58.7	63.6	68.5
87.5°	29.3	29.3	34.2	39.1	44.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)