

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: P562609

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-80-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562609
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-80-84-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9833.0 lumens
Efficiency: N/A
Efficacy: 113.8 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

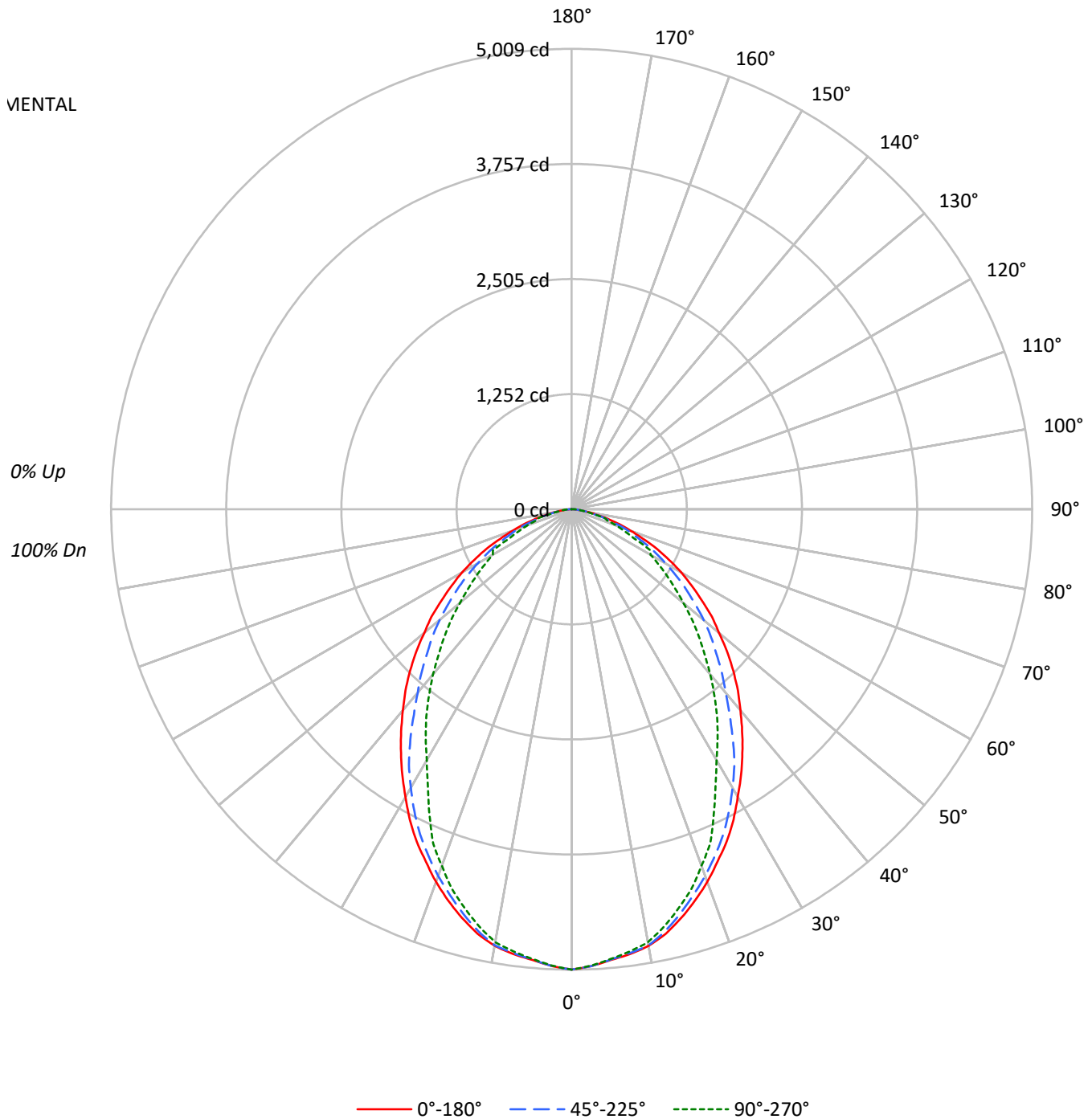
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6739	6739	6739
5°	6648	6640	6632
10°	6590	6582	6535
15°	6412	6348	6259
20°	6177	6077	5911
25°	5923	5794	5433
30°	5614	5434	4894
35°	5317	5022	4527
40°	5014	4577	4119
45°	4727	4231	3724
50°	4376	3927	3321
55°	4048	3559	2975
60°	3708	3179	2665
65°	3263	2784	2360
70°	2688	2437	2005
75°	2137	1866	1957
80°	1436	1346	1256
85°	894	1073	1252

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4727 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	466.3	4.7
10°-20°	1279.6	13.0
20°-30°	1771.5	18.0
30°-40°	1888.9	19.2
40°-50°	1723.3	17.5
50°-60°	1350.0	13.7
60°-70°	879.9	8.9
70°-80°	389.8	4.0
80°-90°	83.7	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°	3517.3	35.8
0°-40°	5406.3	55.0
0°-60°	8479.6	86.2
0°-90°	9833.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9833.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5009	5009	5009	5009	5009	
5°	4922	4916	4916	4910	4910	467
15°	4604	4604	4557	4511	4493	1294
25°	3990	3966	3903	3764	3660	1832
35°	3237	3214	3057	2826	2756	2024
45°	2484	2432	2224	2038	1957	1913
55°	1726	1674	1517	1338	1268	1548
65°	1025	967	874	892	741	1010
75°	411	382	359	342	376	441
85°	58	64	70	75	81	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5008.8	5008.8	5008.8	5008.8	5008.8
2.5°	4974.1	4974.1	4974.1	4968.3	4968.3
5°	4921.9	4916.2	4916.2	4910.4	4910.4
7.5°	4881.4	4875.6	4869.8	4864.0	4852.5
10°	4823.5	4823.5	4817.7	4788.8	4783.0
12.5°	4730.9	4725.1	4701.9	4661.4	4649.8
15°	4603.5	4603.5	4557.1	4510.8	4493.4
17.5°	4464.5	4458.7	4400.8	4354.5	4331.3
20°	4313.9	4302.4	4244.5	4169.2	4128.6
22.5°	4146.0	4146.0	4076.5	3978.1	3937.6
25°	3989.7	3966.5	3902.8	3763.8	3659.6
27.5°	3810.2	3775.4	3705.9	3509.1	3387.5
30°	3613.3	3595.9	3497.5	3242.7	3150.0
32.5°	3428.0	3399.0	3294.8	3028.4	2953.2
35°	3236.9	3213.7	3057.4	2825.8	2756.3
37.5°	3045.8	3016.9	2820.0	2634.7	2547.8
40°	2854.7	2820.0	2605.7	2437.8	2345.2
42.5°	2675.2	2628.9	2420.4	2240.9	2136.7
45°	2484.1	2432.0	2223.6	2038.3	1957.2
47.5°	2293.0	2246.7	2055.6	1864.5	1771.9
50°	2090.4	2049.8	1876.1	1685.0	1586.6
52.5°	1922.5	1858.8	1690.8	1499.7	1418.7
55°	1725.6	1673.5	1517.1	1337.6	1268.1
57.5°	1546.1	1494.0	1349.2	1181.3	1123.4
60°	1378.1	1302.9	1181.3	1036.5	990.2
62.5°	1192.8	1134.9	1030.7	909.1	967.0
65°	1024.9	967.0	874.4	891.7	741.2
67.5°	839.6	810.7	729.6	648.5	625.4
70°	683.3	648.5	619.6	532.7	509.6
72.5°	544.3	509.6	469.0	422.7	405.3
75°	411.1	382.2	359.0	341.6	376.4
77.5°	283.7	272.2	254.8	237.4	231.6
80°	185.3	179.5	173.7	167.9	162.1
82.5°	110.0	110.0	110.0	110.0	110.0
85°	57.9	63.7	69.5	75.3	81.1
87.5°	34.7	34.7	40.5	46.3	52.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)