

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: P562648

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-82-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562648
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-82-88-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6718.0 lumens
Efficiency: N/A
Efficacy: 77.8 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

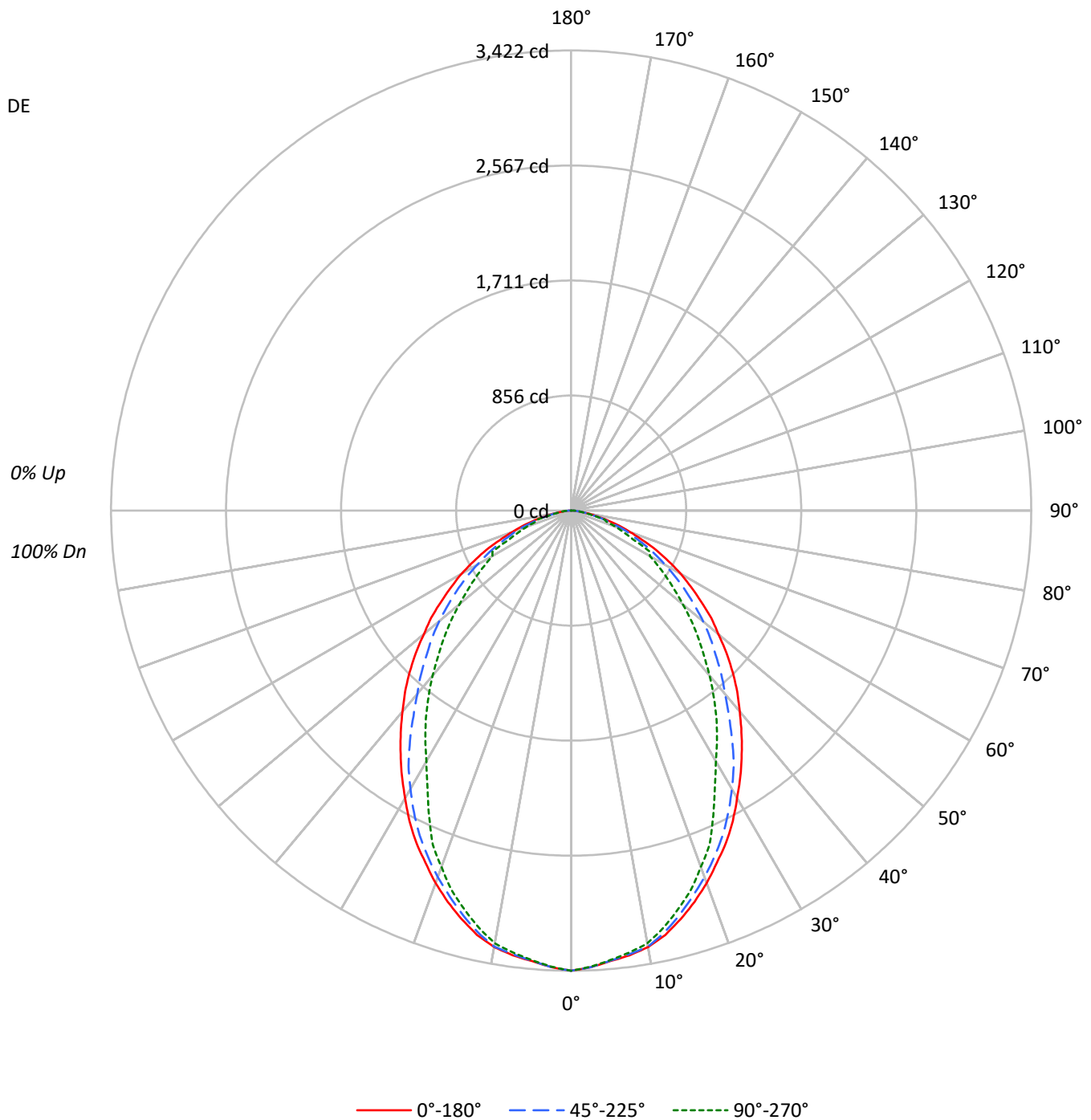
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4604	4604	4604
5°	4542	4536	4531
10°	4502	4497	4465
15°	4381	4337	4276
20°	4220	4152	4039
25°	4047	3958	3712
30°	3835	3712	3344
35°	3632	3431	3093
40°	3426	3127	2814
45°	3229	2891	2544
50°	2990	2683	2269
55°	2765	2431	2032
60°	2534	2172	1820
65°	2229	1902	1612
70°	1836	1665	1369
75°	1460	1275	1337
80°	981	920	859
85°	611	733	855

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3229 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	318.5	4.7
10°-20°	874.2	13.0
20°-30°	1210.3	18.0
30°-40°	1290.5	19.2
40°-50°	1177.4	17.5
50°-60°	922.4	13.7
60°-70°	601.2	8.9
70°-80°	266.3	4.0
80°-90°	57.2	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°	2403.1	35.8
0°-40°	3693.6	55.0
0°-60°	5793.3	86.2
0°-90°	6718.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6718.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3422	3422	3422	3422	3422	
5°	3363	3359	3359	3355	3355	319
15°	3145	3145	3114	3082	3070	884
25°	2726	2710	2666	2572	2500	1251
35°	2212	2196	2089	1931	1883	1383
45°	1697	1662	1519	1393	1337	1307
55°	1179	1143	1036	914	866	1057
65°	700	661	597	609	506	690
75°	281	261	245	233	257	301
85°	40	44	48	51	55	55
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3422.1	3422.1	3422.1	3422.1	3422.1
2.5°	3398.3	3398.3	3398.3	3394.4	3394.4
5°	3362.7	3358.8	3358.8	3354.8	3354.8
7.5°	3335.0	3331.1	3327.1	3323.2	3315.2
10°	3295.5	3295.5	3291.5	3271.7	3267.8
12.5°	3232.2	3228.2	3212.4	3184.7	3176.8
15°	3145.1	3145.1	3113.5	3081.8	3070.0
17.5°	3050.2	3046.2	3006.7	2975.0	2959.2
20°	2947.3	2939.4	2899.8	2848.4	2820.7
22.5°	2832.6	2832.6	2785.1	2717.9	2690.2
25°	2725.8	2710.0	2666.4	2571.5	2500.3
27.5°	2603.1	2579.4	2531.9	2397.4	2314.3
30°	2468.6	2456.8	2389.5	2215.4	2152.1
32.5°	2342.0	2322.3	2251.0	2069.1	2017.6
35°	2211.5	2195.7	2088.8	1930.6	1883.1
37.5°	2080.9	2061.1	1926.6	1800.0	1740.7
40°	1950.4	1926.6	1780.3	1665.5	1602.2
42.5°	1827.7	1796.1	1653.7	1531.0	1459.8
45°	1697.2	1661.6	1519.2	1392.6	1337.2
47.5°	1566.6	1535.0	1404.4	1273.9	1210.6
50°	1428.2	1400.5	1281.8	1151.2	1084.0
52.5°	1313.4	1269.9	1155.2	1024.6	969.3
55°	1178.9	1143.3	1036.5	913.9	866.4
57.5°	1056.3	1020.7	921.8	807.1	767.5
60°	941.6	890.1	807.1	708.1	676.5
62.5°	815.0	775.4	704.2	621.1	660.7
65°	700.2	660.7	597.4	609.2	506.4
67.5°	573.6	553.9	498.5	443.1	427.3
70°	466.8	443.1	423.3	364.0	348.1
72.5°	371.9	348.1	320.4	288.8	276.9
75°	280.9	261.1	245.3	233.4	257.1
77.5°	193.9	185.9	174.1	162.2	158.2
80°	126.6	122.6	118.7	114.7	110.8
82.5°	75.2	75.2	75.2	75.2	75.2
85°	39.6	43.5	47.5	51.4	55.4
87.5°	23.7	23.7	27.7	31.6	35.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)