

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: P563529

Luminaire Tested: FSR-24-4-LD4-3STD-40-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563529
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-LD4-3STD-40-UNV-81-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9485.0 lumens
Efficiency: N/A
Efficacy: 94.9 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

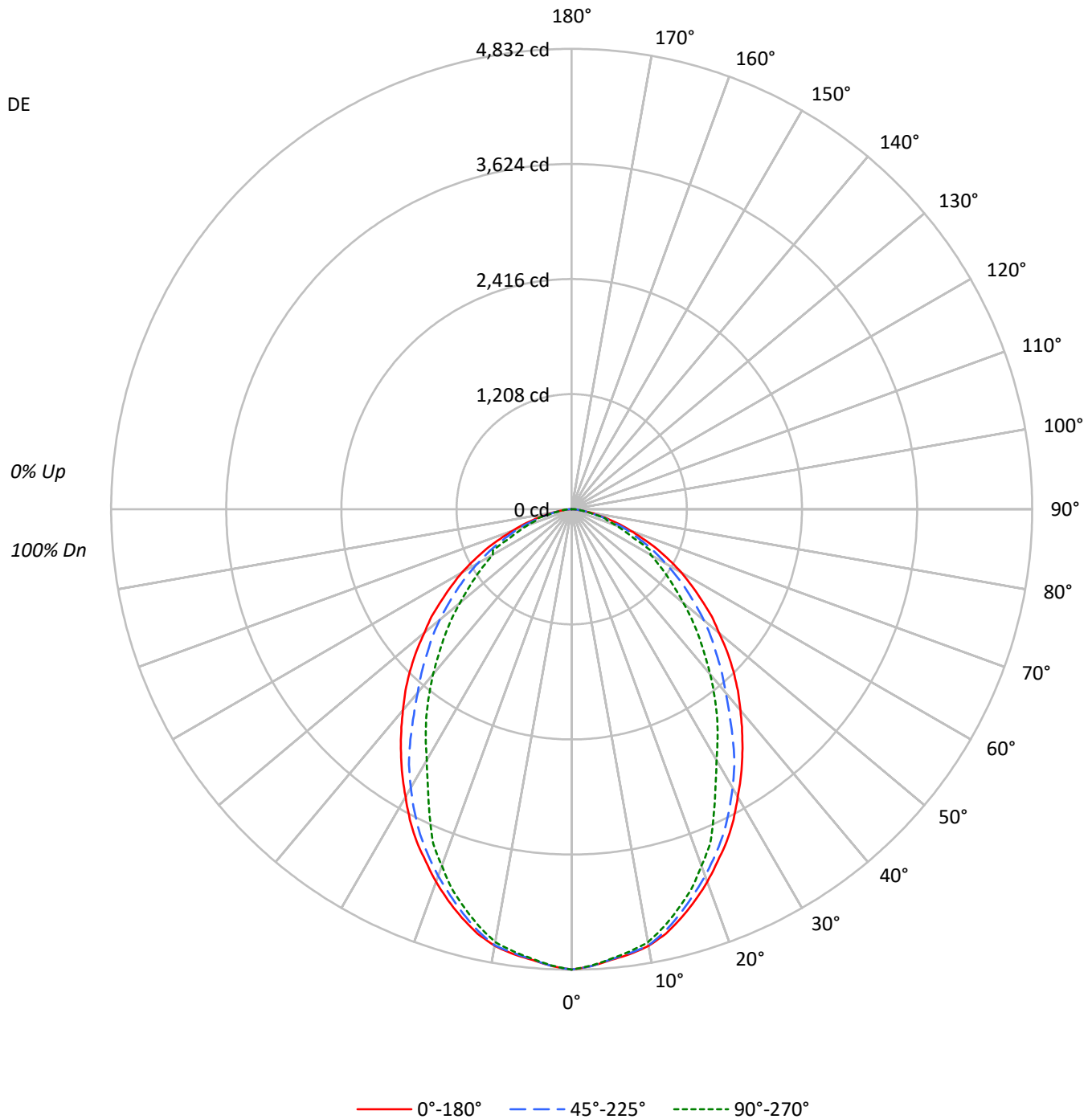
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6501	6501	6501
5°	6412	6405	6397
10°	6357	6349	6303
15°	6185	6123	6038
20°	5958	5862	5702
25°	5713	5589	5241
30°	5415	5242	4721
35°	5129	4844	4367
40°	4837	4415	3973
45°	4560	4081	3592
50°	4221	3788	3204
55°	3905	3433	2869
60°	3577	3066	2570
65°	3147	2685	2276
70°	2593	2351	1934
75°	2062	1800	1888
80°	1385	1299	1212
85°	863	1034	1207

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4560 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	449.8	4.7
10°-20°	1234.3	13.0
20°-30°	1708.8	18.0
30°-40°	1822.1	19.2
40°-50°	1662.3	17.5
50°-60°	1302.3	13.7
60°-70°	848.8	8.9
70°-80°	376.0	4.0
80°-90°	80.7	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°	3392.9	35.8
0°-40°	5214.9	55.0
0°-60°	8179.5	86.2
0°-90°	9485.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9485.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4832	4832	4832	4832	4832	
5°	4748	4742	4742	4737	4737	451
15°	4440	4440	4396	4351	4334	1248
25°	3848	3826	3765	3631	3530	1767
35°	3122	3100	2949	2726	2659	1952
45°	2396	2346	2145	1966	1888	1846
55°	1664	1614	1463	1290	1223	1493
65°	989	933	843	860	715	974
75°	397	369	346	330	363	425
85°	56	61	67	73	78	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4831.5	4831.5	4831.5	4831.5	4831.5
2.5°	4798.0	4798.0	4798.0	4792.4	4792.4
5°	4747.7	4742.2	4742.2	4736.6	4736.6
7.5°	4708.6	4703.1	4697.5	4691.9	4680.7
10°	4652.8	4652.8	4647.2	4619.3	4613.7
12.5°	4563.4	4557.8	4535.5	4496.4	4485.2
15°	4440.5	4440.5	4395.9	4351.2	4334.4
17.5°	4306.5	4300.9	4245.0	4200.4	4178.0
20°	4161.3	4150.1	4094.2	4021.6	3982.5
22.5°	3999.3	3999.3	3932.3	3837.3	3798.2
25°	3848.5	3826.1	3764.7	3630.6	3530.1
27.5°	3675.3	3641.8	3574.8	3384.9	3267.6
30°	3485.4	3468.6	3373.7	3127.9	3038.6
32.5°	3306.7	3278.7	3178.2	2921.3	2848.6
35°	3122.3	3100.0	2949.2	2725.8	2658.7
37.5°	2938.0	2910.1	2720.2	2541.4	2457.7
40°	2753.7	2720.2	2513.5	2351.5	2262.2
42.5°	2580.5	2535.9	2334.8	2161.6	2061.1
45°	2396.2	2345.9	2144.9	1966.1	1887.9
47.5°	2211.9	2167.2	1982.9	1798.6	1709.2
50°	2016.4	1977.3	1809.7	1625.4	1530.5
52.5°	1854.4	1793.0	1631.0	1446.7	1368.5
55°	1664.5	1614.2	1463.4	1290.3	1223.2
57.5°	1491.4	1441.1	1301.4	1139.5	1083.6
60°	1329.4	1256.8	1139.5	999.8	955.1
62.5°	1150.6	1094.8	994.2	876.9	932.8
65°	988.6	932.8	843.4	860.2	715.0
67.5°	809.9	782.0	703.8	625.6	603.2
70°	659.1	625.6	597.7	513.9	491.5
72.5°	525.0	491.5	452.4	407.7	391.0
75°	396.6	368.6	346.3	329.5	363.1
77.5°	273.7	262.5	245.8	229.0	223.4
80°	178.7	173.2	167.6	162.0	156.4
82.5°	106.1	106.1	106.1	106.1	106.1
85°	55.9	61.4	67.0	72.6	78.2
87.5°	33.5	33.5	39.1	44.7	50.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)