

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: P562525

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562525
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-82-96-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8825.0 lumens
Efficiency: N/A
Efficacy: 102.1 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

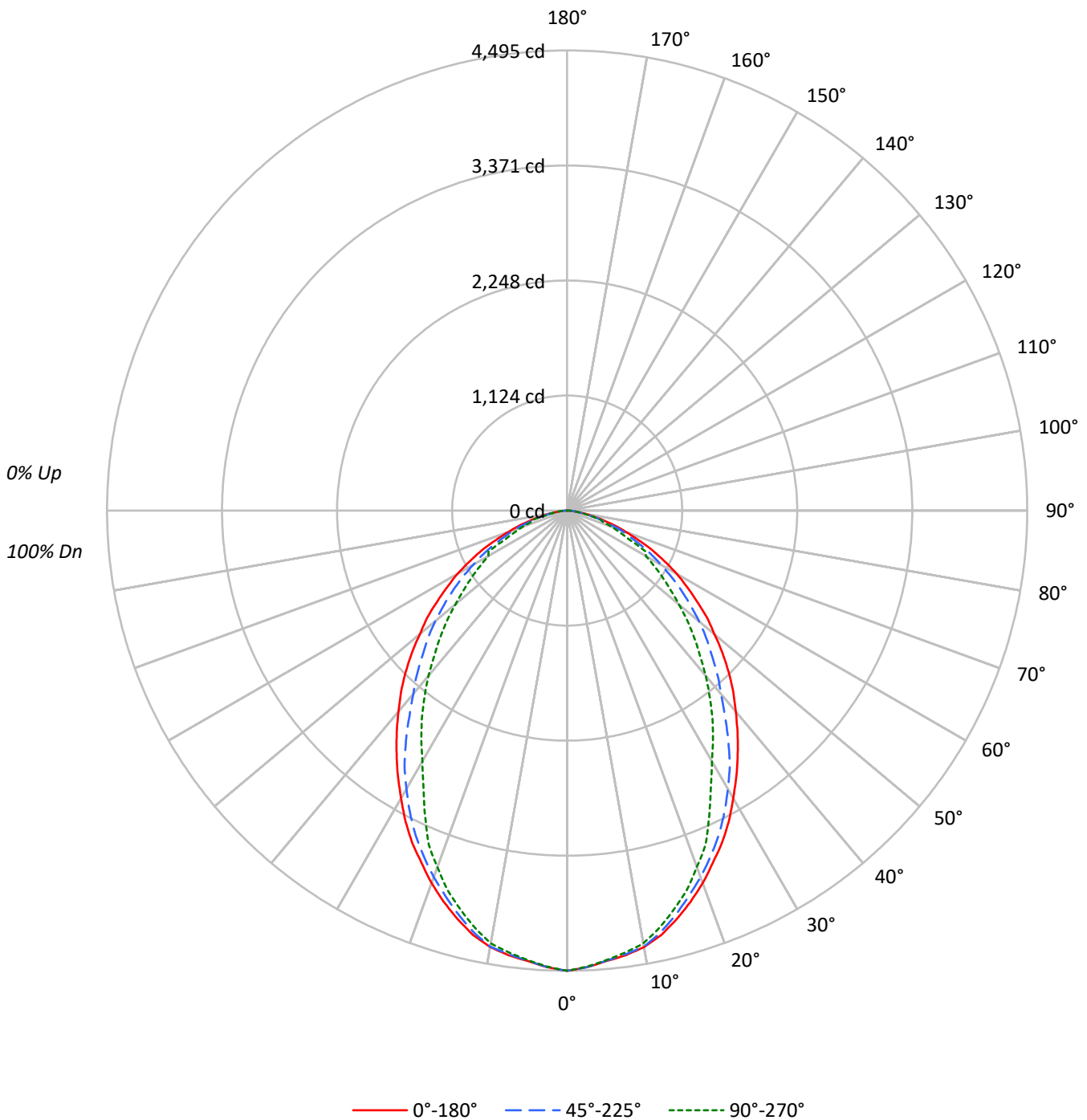
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6048	6048	6048
5°	5966	5959	5952
10°	5914	5907	5865
15°	5755	5697	5618
20°	5544	5454	5306
25°	5316	5200	4876
30°	5038	4877	4392
35°	4772	4507	4063
40°	4500	4108	3697
45°	4242	3797	3342
50°	3927	3525	2981
55°	3633	3194	2670
60°	3328	2853	2391
65°	2929	2498	2118
70°	2412	2188	1799
75°	1918	1675	1756
80°	1289	1208	1127
85°	803	963	1124

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4242 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	418.5	4.7
10°-20°	1148.4	13.0
20°-30°	1589.9	18.0
30°-40°	1695.3	19.2
40°-50°	1546.6	17.5
50°-60°	1211.6	13.7
60°-70°	789.7	8.9
70°-80°	349.9	4.0
80°-90°	75.1	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°	3156.8	35.8
0°-40°	4852.1	55.0
0°-60°	7610.3	86.2
0°-90°	8825.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8825.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4495	4495	4495	4495	4495	
5°	4417	4412	4412	4407	4407	419
15°	4132	4132	4090	4048	4033	1161
25°	3581	3560	3503	3378	3284	1644
35°	2905	2884	2744	2536	2474	1816
45°	2230	2183	1996	1829	1757	1717
55°	1549	1502	1362	1200	1138	1389
65°	920	868	785	800	665	907
75°	369	343	322	307	338	395
85°	52	57	62	68	73	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4495.3	4495.3	4495.3	4495.3	4495.3
2.5°	4464.2	4464.2	4464.2	4459.0	4459.0
5°	4417.4	4412.2	4412.2	4407.0	4407.0
7.5°	4381.0	4375.8	4370.6	4365.4	4355.0
10°	4329.0	4329.0	4323.8	4297.9	4292.7
12.5°	4245.9	4240.7	4219.9	4183.5	4173.1
15°	4131.6	4131.6	4090.0	4048.4	4032.8
17.5°	4006.8	4001.6	3949.7	3908.1	3887.3
20°	3871.7	3861.3	3809.3	3741.8	3705.4
22.5°	3721.0	3721.0	3658.6	3570.3	3533.9
25°	3580.7	3559.9	3502.7	3378.0	3284.5
27.5°	3419.6	3388.4	3326.0	3149.3	3040.2
30°	3242.9	3227.3	3138.9	2910.3	2827.1
32.5°	3076.6	3050.6	2957.0	2718.0	2650.4
35°	2905.1	2884.3	2744.0	2536.1	2473.7
37.5°	2733.6	2707.6	2530.9	2364.6	2286.6
40°	2562.1	2530.9	2338.6	2187.9	2104.8
42.5°	2401.0	2359.4	2172.3	2011.2	1917.7
45°	2229.5	2182.7	1995.6	1829.3	1756.6
47.5°	2058.0	2016.4	1844.9	1673.4	1590.3
50°	1876.1	1839.7	1683.8	1512.3	1424.0
52.5°	1725.4	1668.2	1517.5	1346.0	1273.2
55°	1548.7	1501.9	1361.6	1200.5	1138.1
57.5°	1387.6	1340.8	1210.9	1060.2	1008.2
60°	1236.9	1169.3	1060.2	930.2	888.7
62.5°	1070.6	1018.6	925.1	815.9	867.9
65°	919.9	867.9	784.7	800.3	665.2
67.5°	753.6	727.6	654.8	582.1	561.3
70°	613.2	582.1	556.1	478.1	457.3
72.5°	488.5	457.3	421.0	379.4	363.8
75°	369.0	343.0	322.2	306.6	337.8
77.5°	254.6	244.3	228.7	213.1	207.9
80°	166.3	161.1	155.9	150.7	145.5
82.5°	98.7	98.7	98.7	98.7	98.7
85°	52.0	57.2	62.4	67.6	72.8
87.5°	31.2	31.2	36.4	41.6	46.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)