

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: P563803

Luminaire Tested: FSR-24-4-LD4-4HI-50-UNV-82-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563803
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-LD4-4HI-50-UNV-82-94-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18331.0 lumens
Efficiency: N/A
Efficacy: 106.1 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

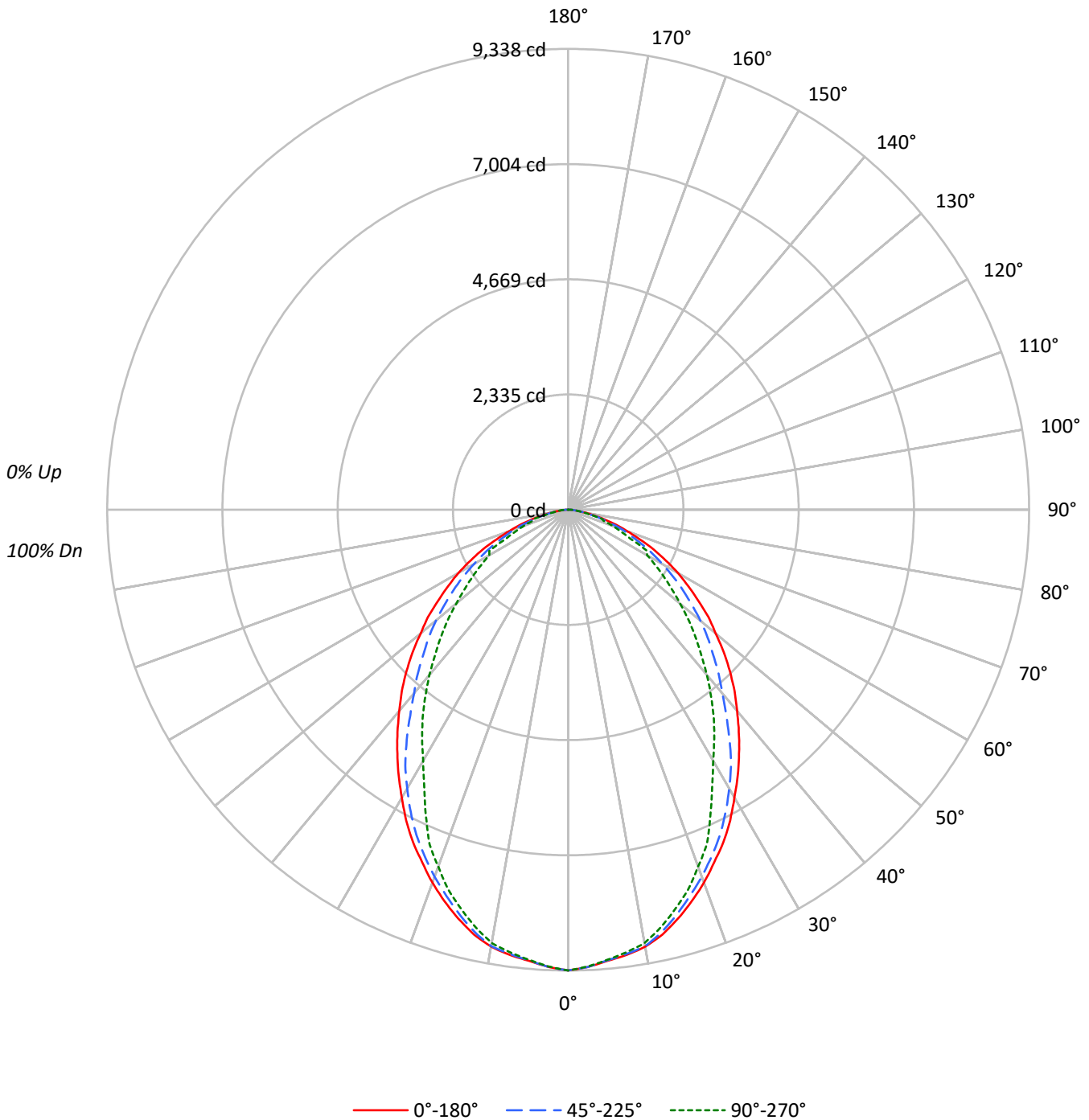
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	12564	12564	12564
5°	12393	12378	12364
10°	12285	12271	12182
15°	11954	11834	11668
20°	11515	11330	11020
25°	11042	10801	10128
30°	10465	10130	9124
35°	9912	9362	8440
40°	9347	8532	7679
45°	8812	7888	6943
50°	8157	7321	6191
55°	7546	6635	5546
60°	6914	5926	4967
65°	6083	5189	4399
70°	5011	4544	3737
75°	3984	3479	3648
80°	2676	2509	2342
85°	1666	1999	2333

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8812 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	869.2	4.7
10°-20°	2385.4	13.0
20°-30°	3302.5	18.0
30°-40°	3521.4	19.2
40°-50°	3212.6	17.5
50°-60°	2516.8	13.7
60°-70°	1640.3	8.9
70°-80°	726.7	4.0
80°-90°	156.0	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°	6557.1	35.8
0°-40°	10078.6	55.0
0°-60°	15807.9	86.2
0°-90°	18331.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18331.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9338	9338	9338	9338	9338	
5°	9176	9165	9165	9154	9154	871
15°	8582	8582	8496	8409	8377	2413
25°	7438	7394	7276	7017	6822	3415
35°	6034	5991	5700	5268	5138	3773
45°	4631	4534	4145	3800	3649	3567
55°	3217	3120	2828	2494	2364	2885
65°	1911	1803	1630	1662	1382	1883
75°	766	712	669	637	702	821
85°	108	119	130	140	151	150
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9337.6	9337.6	9337.6	9337.6	9337.6
2.5°	9272.8	9272.8	9272.8	9262.0	9262.0
5°	9175.6	9164.8	9164.8	9154.1	9154.1
7.5°	9100.1	9089.3	9078.5	9067.7	9046.1
10°	8992.1	8992.1	8981.3	8927.4	8916.6
12.5°	8819.4	8808.6	8765.4	8689.9	8668.3
15°	8581.9	8581.9	8495.6	8409.2	8376.8
17.5°	8322.8	8312.1	8204.1	8117.7	8074.6
20°	8042.2	8020.6	7912.6	7772.3	7696.7
22.5°	7729.1	7729.1	7599.6	7416.1	7340.5
25°	7437.7	7394.5	7275.7	7016.7	6822.4
27.5°	7103.0	7038.3	6908.7	6541.7	6315.0
30°	6736.0	6703.6	6520.1	6045.1	5872.4
32.5°	6390.6	6336.6	6142.3	5645.7	5505.4
35°	6034.3	5991.2	5699.7	5267.9	5138.4
37.5°	5678.1	5624.1	5257.1	4911.7	4749.7
40°	5321.9	5257.1	4857.7	4544.6	4371.9
42.5°	4987.2	4900.9	4512.3	4177.6	3983.3
45°	4631.0	4533.8	4145.2	3799.8	3648.7
47.5°	4274.8	4188.4	3832.2	3475.9	3303.2
50°	3896.9	3821.4	3497.5	3141.3	2957.8
52.5°	3583.9	3465.2	3152.1	2795.9	2644.7
55°	3216.9	3119.7	2828.3	2493.6	2364.1
57.5°	2882.2	2785.1	2515.2	2202.2	2094.2
60°	2569.2	2428.8	2202.2	1932.3	1845.9
62.5°	2223.7	2115.8	1921.5	1694.8	1802.7
65°	1910.7	1802.7	1630.0	1662.4	1381.7
67.5°	1565.3	1511.3	1360.2	1209.0	1165.8
70°	1273.8	1209.0	1155.1	993.1	949.9
72.5°	1014.7	949.9	874.4	788.0	755.6
75°	766.4	712.5	669.3	636.9	701.7
77.5°	528.9	507.4	475.0	442.6	431.8
80°	345.4	334.6	323.8	313.1	302.3
82.5°	205.1	205.1	205.1	205.1	205.1
85°	107.9	118.7	129.5	140.3	151.1
87.5°	64.8	64.8	75.6	86.4	97.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)