

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: P563893

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563893
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-LD4-4LO-40-UNV-80-86-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11409.0 lumens
Efficiency: N/A
Efficacy: 121.9 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

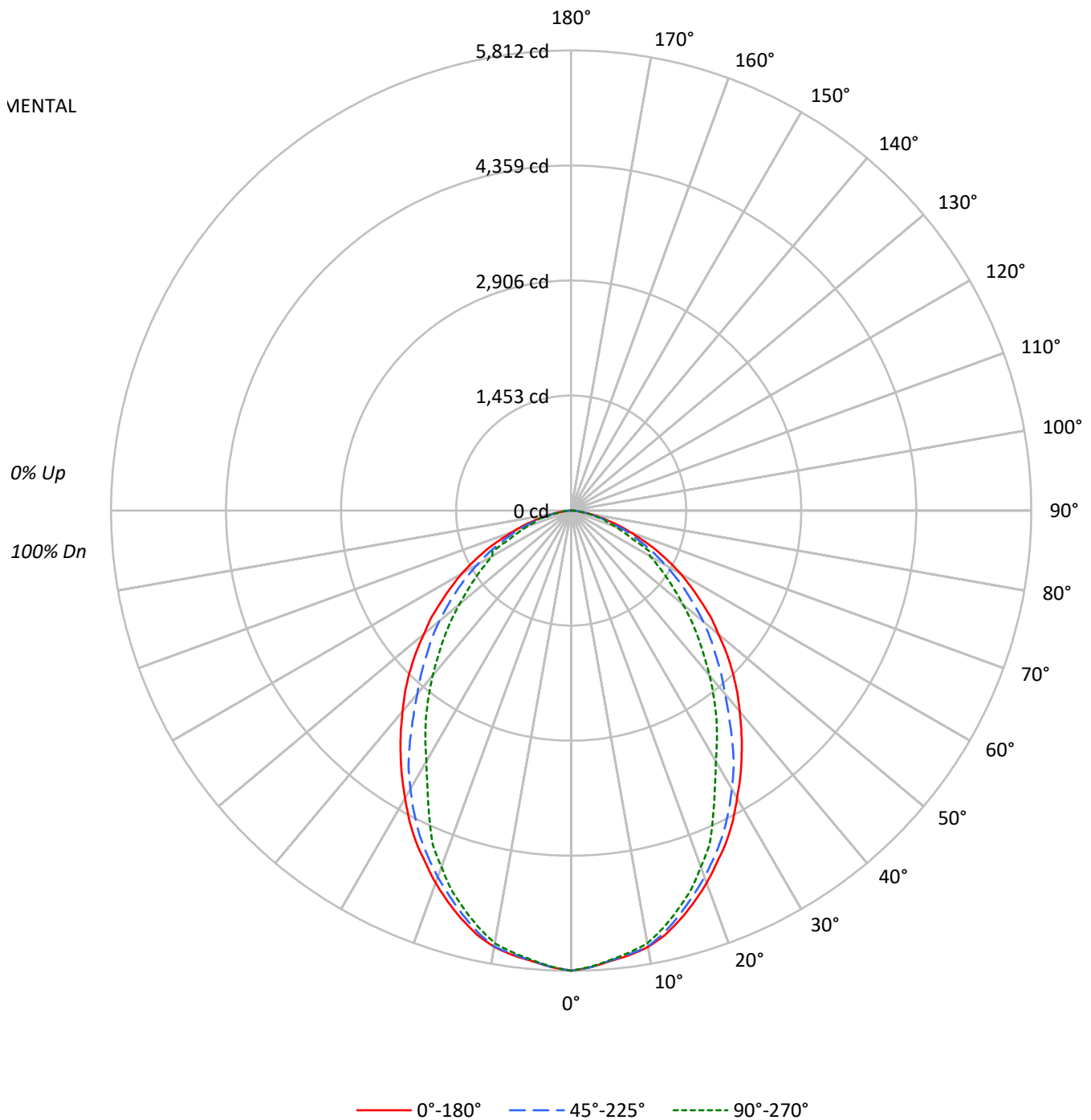
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7819	7819	7819
5°	7713	7704	7695
10°	7646	7637	7582
15°	7440	7365	7262
20°	7167	7051	6859
25°	6872	6723	6304
30°	6513	6305	5678
35°	6169	5827	5253
40°	5818	5310	4779
45°	5484	4909	4321
50°	5077	4556	3853
55°	4697	4129	3452
60°	4303	3688	3092
65°	3786	3230	2738
70°	3119	2828	2326
75°	2480	2166	2270
80°	1666	1562	1457
85°	1037	1244	1453

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5484 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	541.0	4.7
10°-20°	1484.7	13.0
20°-30°	2055.4	18.0
30°-40°	2191.7	19.2
40°-50°	1999.5	17.5
50°-60°	1566.4	13.7
60°-70°	1020.9	8.9
70°-80°	452.3	4.0
80°-90°	97.1	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°	4081.1	35.8
0°-40°	6272.8	55.0
0°-60°	9838.7	86.2
0°-90°	11409.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11409.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5812	5812	5812	5812	5812	
5°	5711	5704	5704	5697	5697	542
15°	5341	5341	5288	5234	5214	1502
25°	4629	4602	4528	4367	4246	2125
35°	3756	3729	3547	3279	3198	2348
45°	2882	2822	2580	2365	2271	2220
55°	2002	1942	1760	1552	1471	1796
65°	1189	1122	1014	1035	860	1172
75°	477	443	417	396	437	511
85°	67	74	81	87	94	93
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5811.6	5811.6	5811.6	5811.6	5811.6
2.5°	5771.3	5771.3	5771.3	5764.6	5764.6
5°	5710.8	5704.1	5704.1	5697.4	5697.4
7.5°	5663.8	5657.1	5650.3	5643.6	5630.2
10°	5596.6	5596.6	5589.9	5556.3	5549.6
12.5°	5489.1	5482.4	5455.5	5408.5	5395.0
15°	5341.3	5341.3	5287.5	5233.8	5213.6
17.5°	5180.0	5173.3	5106.1	5052.4	5025.5
20°	5005.4	4991.9	4924.7	4837.4	4790.4
22.5°	4810.5	4810.5	4729.9	4615.7	4568.7
25°	4629.1	4602.2	4528.3	4367.1	4246.2
27.5°	4420.8	4380.5	4299.9	4071.5	3930.4
30°	4192.4	4172.3	4058.0	3762.4	3654.9
32.5°	3977.4	3943.8	3822.9	3513.8	3426.5
35°	3755.7	3728.8	3547.4	3278.7	3198.1
37.5°	3534.0	3500.4	3272.0	3057.0	2956.2
40°	3312.3	3272.0	3023.4	2828.5	2721.0
42.5°	3104.0	3050.2	2808.4	2600.1	2479.2
45°	2882.3	2821.8	2579.9	2364.9	2270.9
47.5°	2660.6	2606.8	2385.1	2163.4	2055.9
50°	2425.4	2378.4	2176.8	1955.1	1840.9
52.5°	2230.6	2156.7	1961.8	1740.1	1646.1
55°	2002.1	1941.7	1760.3	1552.0	1471.4
57.5°	1793.9	1733.4	1565.4	1370.6	1303.4
60°	1599.0	1511.7	1370.6	1202.6	1148.9
62.5°	1384.0	1316.8	1195.9	1054.8	1122.0
65°	1189.2	1122.0	1014.5	1034.7	860.0
67.5°	974.2	940.6	846.5	752.5	725.6
70°	792.8	752.5	718.9	618.1	591.2
72.5°	631.5	591.2	544.2	490.5	470.3
75°	477.0	443.4	416.6	396.4	436.7
77.5°	329.2	315.8	295.6	275.5	268.7
80°	215.0	208.3	201.6	194.8	188.1
82.5°	127.7	127.7	127.7	127.7	127.7
85°	67.2	73.9	80.6	87.3	94.1
87.5°	40.3	40.3	47.0	53.7	60.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)