

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: P562661

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562661
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-93-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9548.0 lumens
Efficiency: N/A
Efficacy: 110.5 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

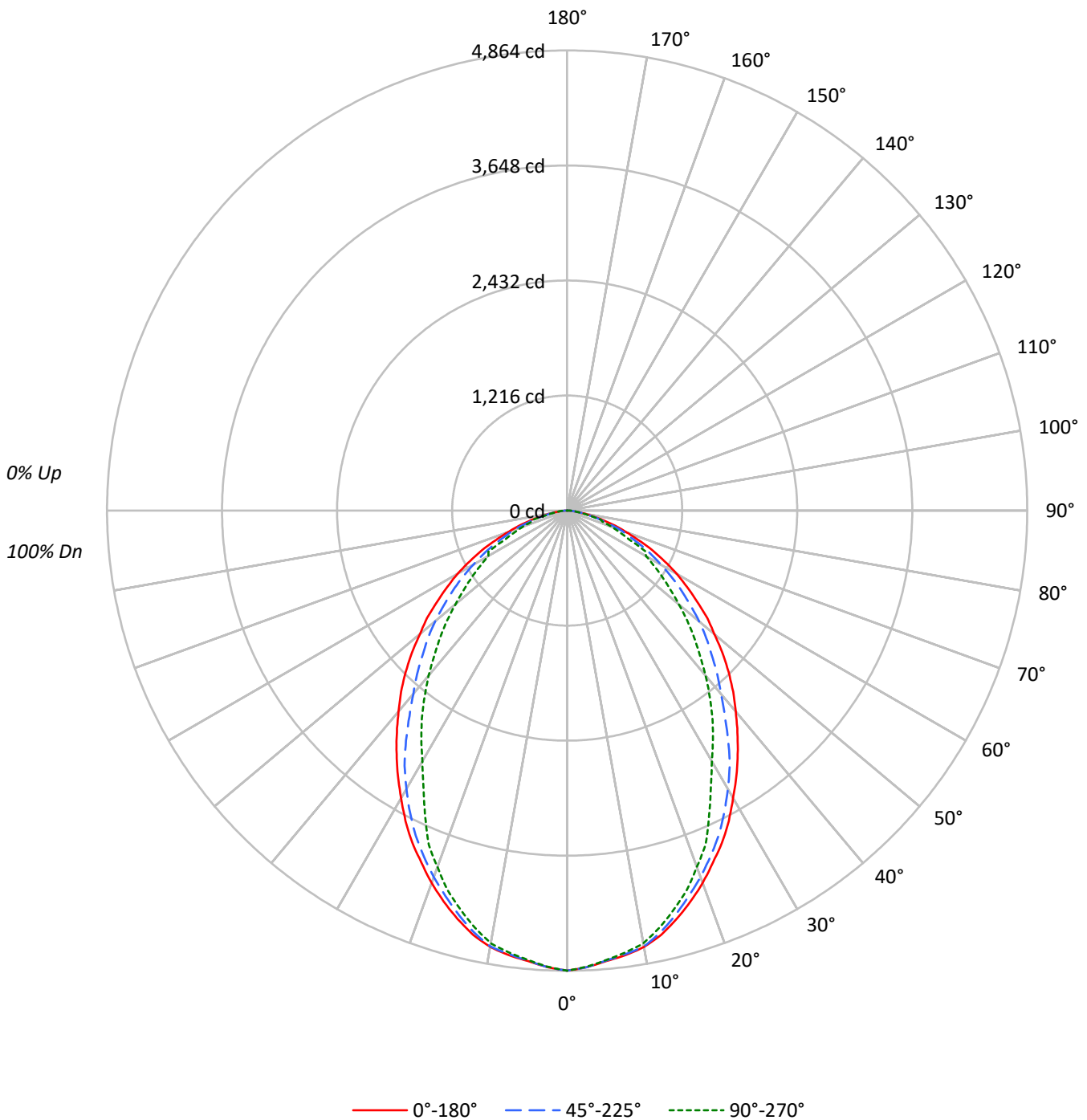
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	6544	6544	6544
5°	6455	6447	6440
10°	6399	6391	6345
15°	6227	6164	6078
20°	5998	5901	5740
25°	5751	5626	5275
30°	5451	5276	4752
35°	5163	4876	4396
40°	4869	4444	4000
45°	4590	4108	3616
50°	4249	3813	3225
55°	3931	3456	2889
60°	3601	3087	2587
65°	3168	2703	2291
70°	2610	2367	1947
75°	2075	1812	1900
80°	1394	1307	1220
85°	868	1042	1215

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4590 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	452.7	4.7
10°-20°	1242.5	13.0
20°-30°	1720.2	18.0
30°-40°	1834.2	19.2
40°-50°	1673.3	17.5
50°-60°	1310.9	13.7
60°-70°	854.4	8.9
70°-80°	378.5	4.0
80°-90°	81.3	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°	3415.4	35.8
0°-40°	5249.6	55.0
0°-60°	8233.8	86.2
0°-90°	9548.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9548.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4864	4864	4864	4864	4864	
5°	4779	4774	4774	4768	4768	454
15°	4470	4470	4425	4380	4363	1257
25°	3874	3852	3790	3655	3554	1779
35°	3143	3121	2969	2744	2676	1965
45°	2412	2362	2159	1979	1900	1858
55°	1676	1625	1473	1299	1231	1503
65°	995	939	849	866	720	981
75°	399	371	349	332	366	428
85°	56	62	68	73	79	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4863.6	4863.6	4863.6	4863.6	4863.6
2.5°	4829.9	4829.9	4829.9	4824.3	4824.3
5°	4779.3	4773.7	4773.7	4768.0	4768.0
7.5°	4739.9	4734.3	4728.7	4723.1	4711.8
10°	4683.7	4683.7	4678.1	4650.0	4644.3
12.5°	4593.7	4588.1	4565.6	4526.3	4515.0
15°	4470.0	4470.0	4425.1	4380.1	4363.2
17.5°	4335.1	4329.5	4273.2	4228.3	4205.8
20°	4188.9	4177.7	4121.4	4048.3	4009.0
22.5°	4025.8	4025.8	3958.4	3862.8	3823.4
25°	3874.0	3851.5	3789.7	3654.7	3553.5
27.5°	3699.7	3666.0	3598.5	3407.3	3289.3
30°	3508.6	3491.7	3396.1	3148.7	3058.7
32.5°	3328.6	3300.5	3199.3	2940.7	2867.6
35°	3143.1	3120.6	2968.8	2743.9	2676.4
37.5°	2957.5	2929.4	2738.2	2558.3	2474.0
40°	2772.0	2738.2	2530.2	2367.2	2277.2
42.5°	2597.7	2552.7	2350.3	2176.0	2074.8
45°	2412.1	2361.5	2159.1	1979.2	1900.5
47.5°	2226.6	2181.6	1996.1	1810.5	1720.5
50°	2029.8	1990.4	1821.8	1636.2	1540.6
52.5°	1866.7	1804.9	1641.8	1456.3	1377.6
55°	1675.6	1625.0	1473.1	1298.8	1231.4
57.5°	1501.3	1450.7	1310.1	1147.0	1090.8
60°	1338.2	1265.1	1147.0	1006.5	961.5
62.5°	1158.3	1102.0	1000.8	882.8	939.0
65°	995.2	939.0	849.0	865.9	719.7
67.5°	815.3	787.2	708.5	629.7	607.3
70°	663.5	629.7	601.6	517.3	494.8
72.5°	528.5	494.8	455.4	410.5	393.6
75°	399.2	371.1	348.6	331.7	365.5
77.5°	275.5	264.3	247.4	230.5	224.9
80°	179.9	174.3	168.7	163.1	157.4
82.5°	106.8	106.8	106.8	106.8	106.8
85°	56.2	61.8	67.5	73.1	78.7
87.5°	33.7	33.7	39.4	45.0	50.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)