

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: P562539

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-93-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562539
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-93-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9614.0 lumens
Efficiency: N/A
Efficacy: 111.3 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

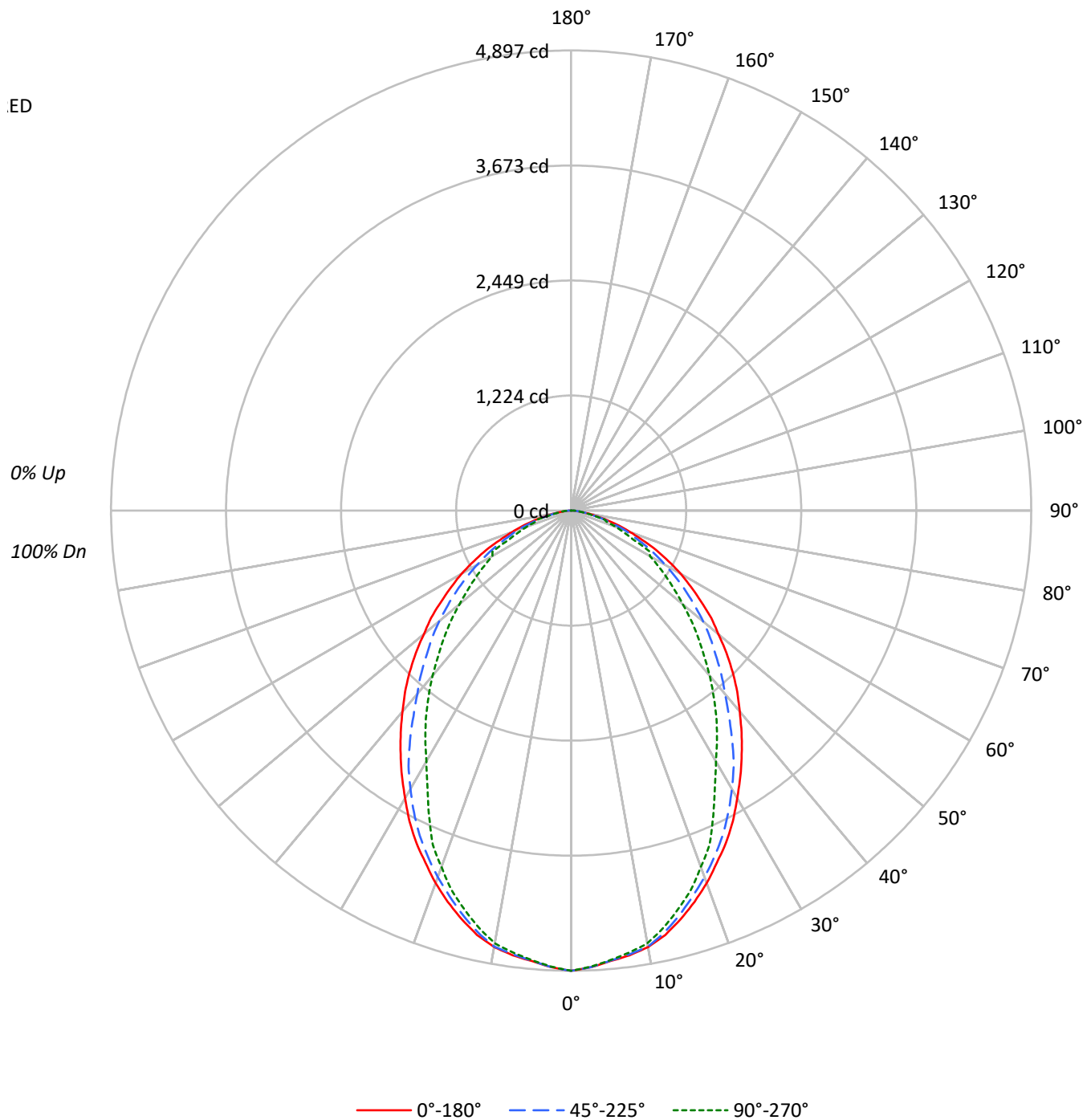
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6589	6589	6589
5°	6500	6492	6484
10°	6443	6436	6389
15°	6270	6206	6120
20°	6039	5942	5780
25°	5791	5665	5312
30°	5489	5313	4785
35°	5198	4910	4426
40°	4902	4475	4027
45°	4622	4137	3641
50°	4278	3840	3247
55°	3958	3480	2909
60°	3626	3108	2605
65°	3190	2722	2307
70°	2628	2383	1960
75°	2090	1825	1913
80°	1404	1316	1228
85°	874	1048	1224

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4622 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	455.9	4.7
10°-20°	1251.1	13.0
20°-30°	1732.1	18.0
30°-40°	1846.9	19.2
40°-50°	1684.9	17.5
50°-60°	1320.0	13.7
60°-70°	860.3	8.9
70°-80°	381.1	4.0
80°-90°	81.8	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°	3439.0	35.8
0°-40°	5285.9	55.0
0°-60°	8290.7	86.2
0°-90°	9614.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9614.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4897	4897	4897	4897	4897	
5°	4812	4807	4807	4801	4801	457
15°	4501	4501	4456	4410	4393	1265
25°	3901	3878	3816	3680	3578	1791
35°	3165	3142	2989	2763	2695	1979
45°	2429	2378	2174	1993	1914	1871
55°	1687	1636	1483	1308	1240	1513
65°	1002	946	855	872	725	988
75°	402	374	351	334	368	431
85°	57	62	68	74	79	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4897.2	4897.2	4897.2	4897.2	4897.2
2.5°	4863.3	4863.3	4863.3	4857.6	4857.6
5°	4812.3	4806.7	4806.7	4801.0	4801.0
7.5°	4772.7	4767.0	4761.4	4755.7	4744.4
10°	4716.1	4716.1	4710.4	4682.1	4676.4
12.5°	4625.5	4619.8	4597.2	4557.5	4546.2
15°	4500.9	4500.9	4455.6	4410.3	4393.4
17.5°	4365.1	4359.4	4302.8	4257.5	4234.8
20°	4217.9	4206.5	4149.9	4076.3	4036.7
22.5°	4053.7	4053.7	3985.7	3889.5	3849.9
25°	3900.8	3878.2	3815.9	3680.0	3578.1
27.5°	3725.3	3691.3	3623.4	3430.9	3312.0
30°	3532.8	3515.8	3419.6	3170.5	3079.9
32.5°	3351.6	3323.3	3221.4	2961.0	2887.4
35°	3164.8	3142.2	2989.3	2762.8	2694.9
37.5°	2978.0	2949.7	2757.2	2576.0	2491.1
40°	2791.1	2757.2	2547.7	2383.5	2292.9
42.5°	2615.6	2570.3	2366.5	2191.0	2089.1
45°	2428.8	2377.9	2174.0	1992.9	1913.6
47.5°	2242.0	2196.7	2009.9	1823.0	1732.4
50°	2043.8	2004.2	1834.3	1647.5	1551.3
52.5°	1879.6	1817.4	1653.2	1466.3	1387.1
55°	1687.1	1636.2	1483.3	1307.8	1239.9
57.5°	1511.6	1460.7	1319.1	1155.0	1098.3
60°	1347.4	1273.8	1155.0	1013.4	968.1
62.5°	1166.3	1109.7	1007.8	888.9	945.5
65°	1002.1	945.5	854.9	871.9	724.7
67.5°	820.9	792.6	713.4	634.1	611.4
70°	668.1	634.1	605.8	520.9	498.2
72.5°	532.2	498.2	458.6	413.3	396.3
75°	402.0	373.7	351.0	334.0	368.0
77.5°	277.4	266.1	249.1	232.1	226.5
80°	181.2	175.5	169.8	164.2	158.5
82.5°	107.6	107.6	107.6	107.6	107.6
85°	56.6	62.3	67.9	73.6	79.3
87.5°	34.0	34.0	39.6	45.3	51.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)