

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: P562555

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-80-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562555
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-40-UNV-80-94-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9691.0 lumens
Efficiency: N/A
Efficacy: 112.2 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

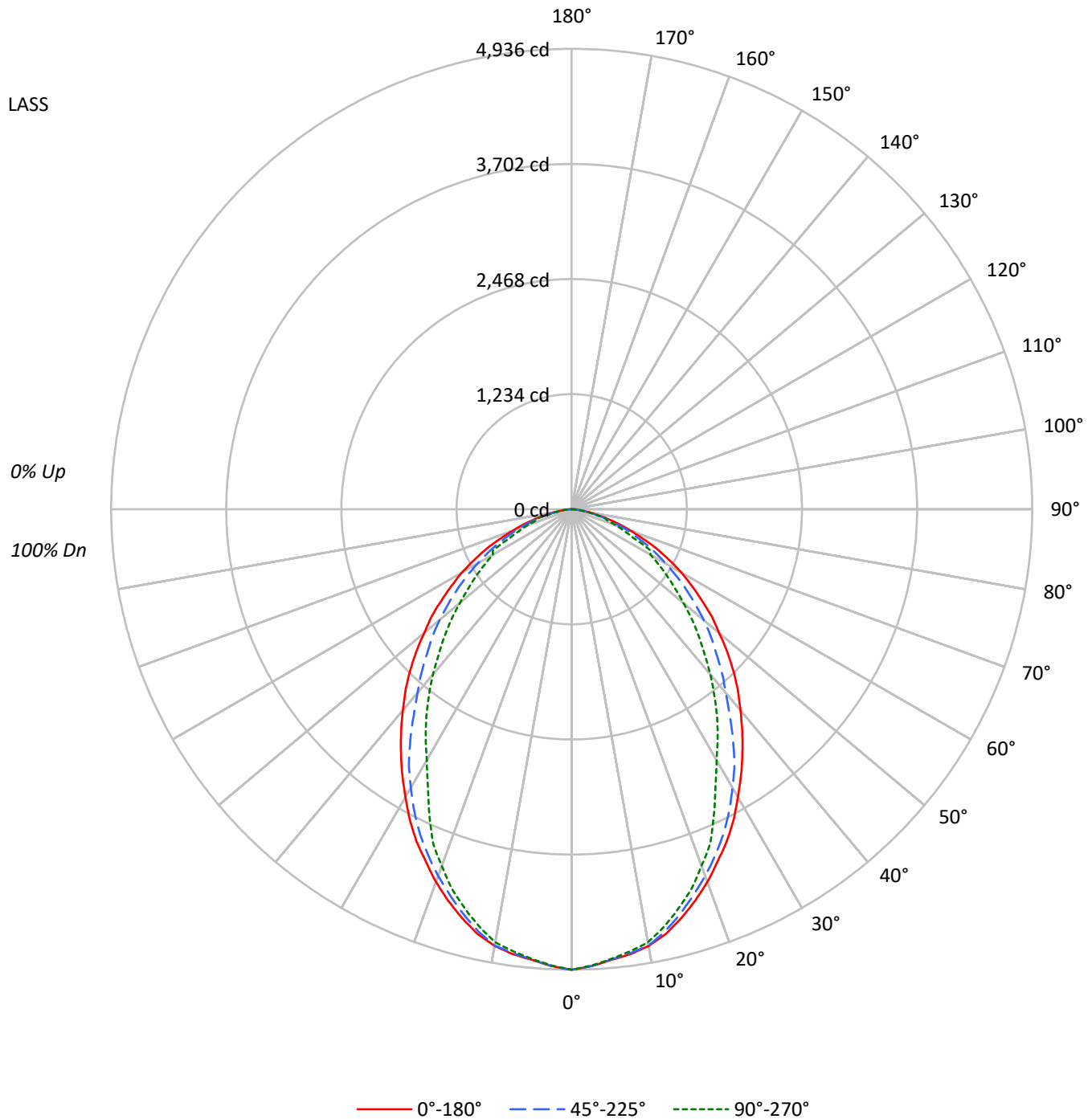
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6642	6642	6642
5°	6552	6544	6536
10°	6495	6487	6440
15°	6320	6256	6169
20°	6088	5990	5826
25°	5838	5710	5355
30°	5533	5355	4823
35°	5240	4949	4462
40°	4942	4511	4060
45°	4659	4170	3670
50°	4312	3870	3273
55°	3989	3507	2932
60°	3655	3133	2626
65°	3216	2743	2326
70°	2649	2402	1976
75°	2106	1839	1928
80°	1415	1327	1238
85°	881	1057	1233

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4659 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	459.5	4.7
10°-20°	1261.1	13.0
20°-30°	1745.9	18.0
30°-40°	1861.7	19.2
40°-50°	1698.4	17.5
50°-60°	1330.5	13.7
60°-70°	867.2	8.9
70°-80°	384.2	4.0
80°-90°	82.5	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°	3466.5	35.8
0°-40°	5328.2	55.0
0°-60°	8357.1	86.2
0°-90°	9691.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9691.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4936	4936	4936	4936	4936	
5°	4851	4845	4845	4839	4839	460
15°	4537	4537	4491	4446	4429	1275
25°	3932	3909	3846	3710	3607	1805
35°	3190	3167	3013	2785	2716	1994
45°	2448	2397	2191	2009	1929	1886
55°	1701	1649	1495	1318	1250	1525
65°	1010	953	862	879	730	995
75°	405	377	354	337	371	434
85°	57	63	68	74	80	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4936.5	4936.5	4936.5	4936.5	4936.5
2.5°	4902.2	4902.2	4902.2	4896.5	4896.5
5°	4850.9	4845.2	4845.2	4839.4	4839.4
7.5°	4810.9	4805.2	4799.5	4793.8	4782.4
10°	4753.8	4753.8	4748.1	4719.6	4713.9
12.5°	4662.5	4656.8	4634.0	4594.1	4582.6
15°	4537.0	4537.0	4491.3	4445.7	4428.6
17.5°	4400.0	4394.3	4337.2	4291.6	4268.8
20°	4251.6	4240.2	4183.2	4109.0	4069.0
22.5°	4086.1	4086.1	4017.7	3920.6	3880.7
25°	3932.1	3909.2	3846.4	3709.5	3606.8
27.5°	3755.1	3720.9	3652.4	3458.4	3338.5
30°	3561.1	3544.0	3447.0	3195.9	3104.6
32.5°	3378.5	3349.9	3247.2	2984.7	2910.5
35°	3190.2	3167.3	3013.2	2785.0	2716.5
37.5°	3001.8	2973.3	2779.3	2596.6	2511.0
40°	2813.5	2779.3	2568.1	2402.6	2311.3
42.5°	2636.6	2590.9	2385.5	2208.6	2105.8
45°	2448.3	2396.9	2191.4	2008.8	1928.9
47.5°	2259.9	2214.3	2025.9	1837.6	1746.3
50°	2060.2	2020.2	1849.0	1660.7	1563.7
52.5°	1894.7	1831.9	1666.4	1478.1	1398.2
55°	1700.7	1649.3	1495.2	1318.3	1249.8
57.5°	1523.7	1472.4	1329.7	1164.2	1107.1
60°	1358.2	1284.1	1164.2	1021.5	975.9
62.5°	1175.6	1118.6	1015.8	896.0	953.1
65°	1010.1	953.1	861.7	878.9	730.5
67.5°	827.5	799.0	719.1	639.2	616.3
70°	673.4	639.2	610.6	525.0	502.2
72.5°	536.4	502.2	462.3	416.6	399.5
75°	405.2	376.7	353.8	336.7	370.9
77.5°	279.6	268.2	251.1	234.0	228.3
80°	182.6	176.9	171.2	165.5	159.8
82.5°	108.4	108.4	108.4	108.4	108.4
85°	57.1	62.8	68.5	74.2	79.9
87.5°	34.2	34.2	39.9	45.7	51.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)