

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: P563881

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-93-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563881
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-35-UNV-93-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9862.0 lumens
Efficiency: N/A
Efficacy: 105.4 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

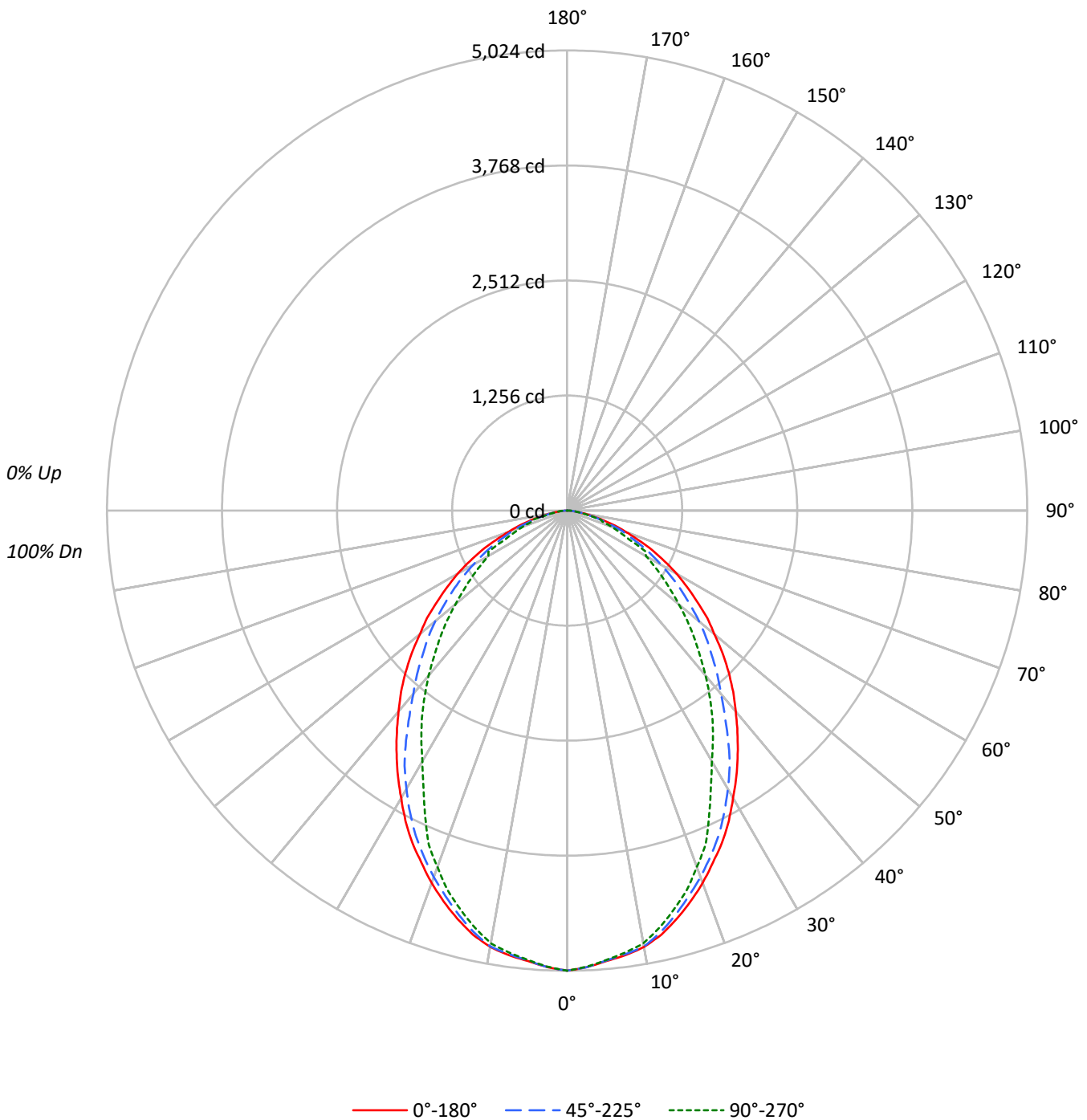
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6759	6759	6759
5°	6667	6659	6652
10°	6609	6602	6554
15°	6431	6367	6278
20°	6195	6095	5929
25°	5940	5811	5449
30°	5630	5450	4908
35°	5332	5037	4541
40°	5029	4590	4131
45°	4741	4243	3735
50°	4388	3939	3331
55°	4060	3569	2984
60°	3719	3188	2672
65°	3273	2792	2367
70°	2696	2445	2011
75°	2143	1872	1962
80°	1440	1350	1260
85°	897	1076	1255

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4741 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	467.6	4.7
10°-20°	1283.4	13.0
20°-30°	1776.7	18.0
30°-40°	1894.5	19.2
40°-50°	1728.3	17.5
50°-60°	1354.0	13.7
60°-70°	882.5	8.9
70°-80°	391.0	4.0
80°-90°	83.9	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°	3527.7	35.8
0°-40°	5422.2	55.0
0°-60°	8504.6	86.2
0°-90°	9862.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9862.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5024	5024	5024	5024	5024	
5°	4936	4931	4931	4925	4925	469
15°	4617	4617	4571	4524	4507	1298
25°	4001	3978	3914	3775	3670	1837
35°	3246	3223	3066	2834	2764	2030
45°	2492	2439	2230	2044	1963	1919
55°	1731	1678	1522	1342	1272	1552
65°	1028	970	877	894	743	1013
75°	412	383	360	343	378	442
85°	58	64	70	76	81	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5023.6	5023.6	5023.6	5023.6	5023.6
2.5°	4988.7	4988.7	4988.7	4982.9	4982.9
5°	4936.5	4930.6	4930.6	4924.8	4924.8
7.5°	4895.8	4890.0	4884.2	4878.4	4866.8
10°	4837.7	4837.7	4831.9	4802.9	4797.1
12.5°	4744.8	4739.0	4715.8	4675.1	4663.5
15°	4617.0	4617.0	4570.6	4524.1	4506.7
17.5°	4477.7	4471.8	4413.8	4367.3	4344.1
20°	4326.7	4315.0	4257.0	4181.5	4140.8
22.5°	4158.2	4158.2	4088.5	3989.8	3949.2
25°	4001.4	3978.2	3914.3	3774.9	3670.4
27.5°	3821.4	3786.6	3716.9	3519.4	3397.4
30°	3623.9	3606.5	3507.8	3252.3	3159.3
32.5°	3438.1	3409.1	3304.5	3037.4	2961.9
35°	3246.4	3223.2	3066.4	2834.1	2764.4
37.5°	3054.8	3025.8	2828.3	2642.5	2555.3
40°	2863.1	2828.3	2613.4	2445.0	2352.1
42.5°	2683.1	2636.6	2427.6	2247.5	2143.0
45°	2491.5	2439.2	2230.1	2044.3	1963.0
47.5°	2299.8	2253.3	2061.7	1870.0	1777.1
50°	2096.5	2055.9	1881.7	1690.0	1591.3
52.5°	1928.1	1864.2	1695.8	1504.2	1422.9
55°	1730.7	1678.4	1521.6	1341.6	1271.9
57.5°	1550.6	1498.4	1353.2	1184.7	1126.7
60°	1382.2	1306.7	1184.7	1039.6	993.1
62.5°	1196.4	1138.3	1033.8	911.8	969.9
65°	1027.9	969.9	876.9	894.4	743.4
67.5°	842.1	813.1	731.8	650.5	627.2
70°	685.3	650.5	621.4	534.3	511.1
72.5°	545.9	511.1	470.4	424.0	406.5
75°	412.3	383.3	360.1	342.6	377.5
77.5°	284.6	273.0	255.5	238.1	232.3
80°	185.8	180.0	174.2	168.4	162.6
82.5°	110.3	110.3	110.3	110.3	110.3
85°	58.1	63.9	69.7	75.5	81.3
87.5°	34.8	34.8	40.7	46.5	52.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)