

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: P562524

Luminaire Tested: FSR-24-4-LD4-2HI-35-UNV-82-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562524
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-82-96-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7384.0 lumens
Efficiency: N/A
Efficacy: 85.5 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

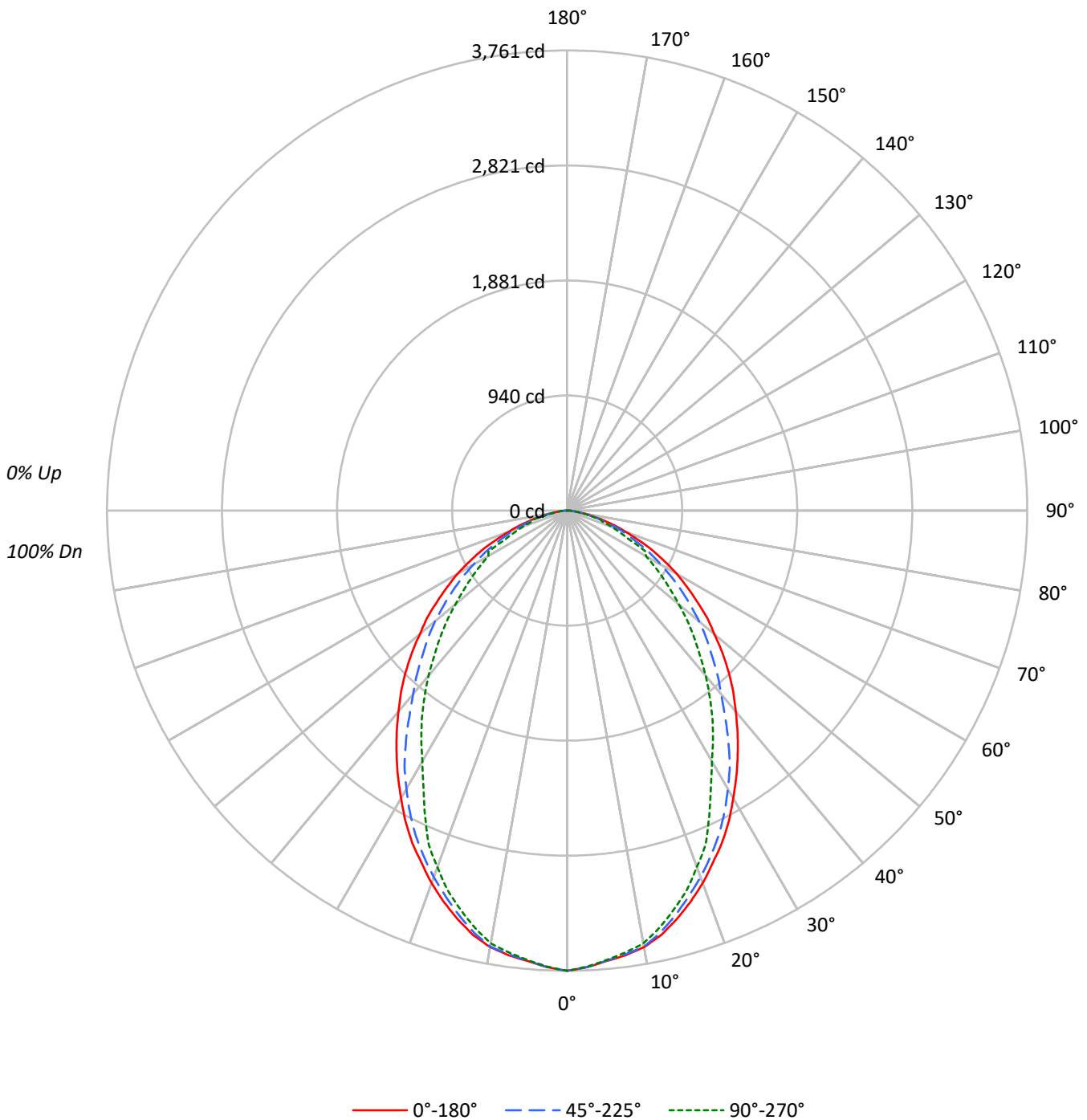
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	50	30	10	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	5061	5061	5061
5°	4992	4986	4980
10°	4949	4943	4907
15°	4815	4767	4700
20°	4638	4564	4439
25°	4448	4351	4080
30°	4216	4080	3675
35°	3993	3771	3400
40°	3765	3437	3093
45°	3550	3177	2797
50°	3286	2949	2494
55°	3040	2673	2234
60°	2785	2387	2001
65°	2450	2090	1772
70°	2019	1830	1506
75°	1605	1402	1469
80°	1078	1011	944
85°	672	806	940

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3550 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	350.1	4.7
10°-20°	960.9	13.0
20°-30°	1330.3	18.0
30°-40°	1418.5	19.2
40°-50°	1294.1	17.5
50°-60°	1013.8	13.7
60°-70°	660.8	8.9
70°-80°	292.7	4.0
80°-90°	62.8	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°	2641.3	35.8
0°-40°	4059.8	55.0
0°-60°	6367.7	86.2
0°-90°	7384.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7384.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3761	3761	3761	3761	3761	
5°	3696	3692	3692	3687	3687	351
15°	3457	3457	3422	3387	3374	972
25°	2996	2979	2931	2826	2748	1375
35°	2431	2413	2296	2122	2070	1520
45°	1865	1826	1670	1531	1470	1437
55°	1296	1257	1139	1004	952	1162
65°	770	726	657	670	557	759
75°	309	287	270	257	283	331
85°	44	48	52	56	61	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3761.3	3761.3	3761.3	3761.3	3761.3
2.5°	3735.2	3735.2	3735.2	3730.9	3730.9
5°	3696.1	3691.7	3691.7	3687.4	3687.4
7.5°	3665.6	3661.3	3657.0	3652.6	3643.9
10°	3622.2	3622.2	3617.8	3596.1	3591.7
12.5°	3552.6	3548.2	3530.8	3500.4	3491.7
15°	3456.9	3456.9	3422.1	3387.4	3374.3
17.5°	3352.6	3348.2	3304.7	3269.9	3252.6
20°	3239.5	3230.8	3187.3	3130.8	3100.4
22.5°	3113.4	3113.4	3061.2	2987.3	2956.9
25°	2996.0	2978.6	2930.8	2826.4	2748.1
27.5°	2861.2	2835.1	2782.9	2635.1	2543.8
30°	2713.4	2700.3	2626.4	2435.1	2365.5
32.5°	2574.2	2552.5	2474.2	2274.2	2217.7
35°	2430.7	2413.3	2295.9	2122.0	2069.8
37.5°	2287.2	2265.5	2117.6	1978.5	1913.3
40°	2143.7	2117.6	1956.8	1830.6	1761.1
42.5°	2008.9	1974.1	1817.6	1682.8	1604.5
45°	1865.4	1826.3	1669.8	1530.6	1469.7
47.5°	1721.9	1687.2	1543.7	1400.2	1330.6
50°	1569.7	1539.3	1408.9	1265.4	1191.4
52.5°	1443.6	1395.8	1269.7	1126.2	1065.3
55°	1295.8	1256.7	1139.3	1004.5	952.3
57.5°	1161.0	1121.9	1013.2	887.1	843.6
60°	1034.9	978.4	887.1	778.4	743.6
62.5°	895.8	852.3	774.0	682.7	726.2
65°	769.7	726.2	656.6	669.6	556.6
67.5°	630.5	608.8	547.9	487.0	469.6
70°	513.1	487.0	465.3	400.0	382.7
72.5°	408.7	382.7	352.2	317.4	304.4
75°	308.7	287.0	269.6	256.6	282.6
77.5°	213.1	204.4	191.3	178.3	173.9
80°	139.1	134.8	130.5	126.1	121.8
82.5°	82.6	82.6	82.6	82.6	82.6
85°	43.5	47.8	52.2	56.5	60.9
87.5°	26.1	26.1	30.4	34.8	39.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)