

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: P563679

Luminaire Tested: FSR-24-4-LD4-4HI-35-UNV-82-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563679
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-LD4-4HI-35-UNV-82-97-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17383.0 lumens
Efficiency: N/A
Efficacy: 100.6 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

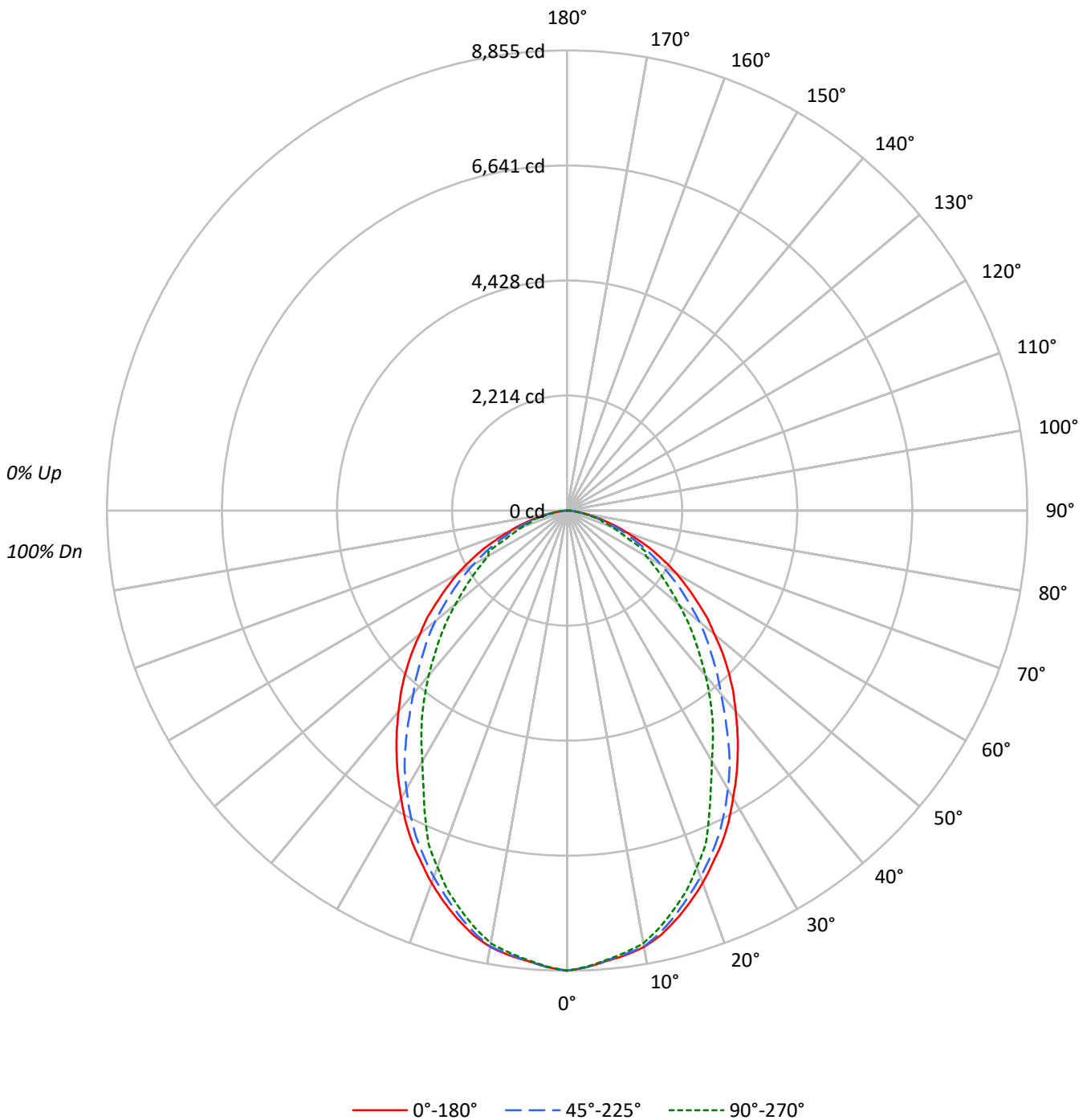
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									70									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						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°	11914	11914	11914
5°	11752	11738	11724
10°	11650	11636	11552
15°	11336	11222	11065
20°	10920	10744	10451
25°	10471	10243	9605
30°	9924	9606	8652
35°	9399	8878	8003
40°	8864	8091	7282
45°	8356	7480	6584
50°	7735	6943	5871
55°	7156	6291	5259
60°	6556	5620	4711
65°	5769	4921	4172
70°	4752	4309	3544
75°	3778	3300	3459
80°	2538	2380	2221
85°	1581	1896	2212

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8356 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	824.3	4.7
10°-20°	2262.1	13.0
20°-30°	3131.7	18.0
30°-40°	3339.3	19.2
40°-50°	3046.4	17.5
50°-60°	2386.6	13.7
60°-70°	1555.5	8.9
70°-80°	689.2	4.0
80°-90°	148.0	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°	6218.0	35.8
0°-40°	9557.3	55.0
0°-60°	14990.4	86.2
0°-90°	17383.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17383.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8855	8855	8855	8855	8855	
5°	8701	8691	8691	8681	8681	826
15°	8138	8138	8056	7974	7944	2288
25°	7053	7012	6900	6654	6470	3238
35°	5722	5681	5405	4996	4873	3577
45°	4392	4299	3931	3603	3460	3383
55°	3050	2958	2682	2365	2242	2736
65°	1812	1710	1546	1576	1310	1786
75°	727	676	635	604	665	779
85°	102	113	123	133	143	142
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8854.7	8854.7	8854.7	8854.7	8854.7
2.5°	8793.2	8793.2	8793.2	8783.0	8783.0
5°	8701.1	8690.9	8690.9	8680.6	8680.6
7.5°	8629.5	8619.2	8609.0	8598.8	8578.3
10°	8527.1	8527.1	8516.9	8465.7	8455.4
12.5°	8363.3	8353.1	8312.1	8240.5	8220.0
15°	8138.1	8138.1	8056.2	7974.3	7943.6
17.5°	7892.4	7882.2	7779.8	7697.9	7657.0
20°	7626.3	7605.8	7503.4	7370.4	7298.7
22.5°	7329.4	7329.4	7206.6	7032.6	6960.9
25°	7053.0	7012.1	6899.5	6653.8	6469.5
27.5°	6735.7	6674.3	6551.4	6203.4	5988.4
30°	6387.6	6356.9	6182.9	5732.5	5568.7
32.5°	6060.1	6008.9	5824.6	5353.7	5220.7
35°	5722.3	5681.3	5404.9	4995.5	4872.6
37.5°	5384.5	5333.3	4985.2	4657.7	4504.1
40°	5046.6	4985.2	4606.5	4309.6	4145.8
42.5°	4729.3	4647.4	4278.9	3961.6	3777.3
45°	4391.5	4299.4	3930.9	3603.3	3460.0
47.5°	4053.7	3971.8	3634.0	3296.2	3132.4
50°	3695.4	3623.8	3316.7	2978.9	2804.8
52.5°	3398.6	3286.0	2989.1	2651.3	2508.0
55°	3050.5	2958.4	2682.0	2364.7	2241.8
57.5°	2733.2	2641.0	2385.1	2088.3	1985.9
60°	2436.3	2303.2	2088.3	1832.4	1750.5
62.5°	2108.7	2006.4	1822.1	1607.1	1709.5
65°	1811.9	1709.5	1545.7	1576.4	1310.3
67.5°	1484.3	1433.1	1289.8	1146.5	1105.6
70°	1207.9	1146.5	1095.3	941.8	900.8
72.5°	962.2	900.8	829.2	747.3	716.6
75°	726.8	675.6	634.7	604.0	665.4
77.5°	501.6	481.1	450.4	419.7	409.5
80°	327.6	317.3	307.1	296.9	286.6
82.5°	194.5	194.5	194.5	194.5	194.5
85°	102.4	112.6	122.8	133.1	143.3
87.5°	61.4	61.4	71.7	81.9	92.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)