

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: P563677

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563677
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-82-96-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 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: 17650.0 lumens
Efficiency: N/A
Efficacy: 102.1 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

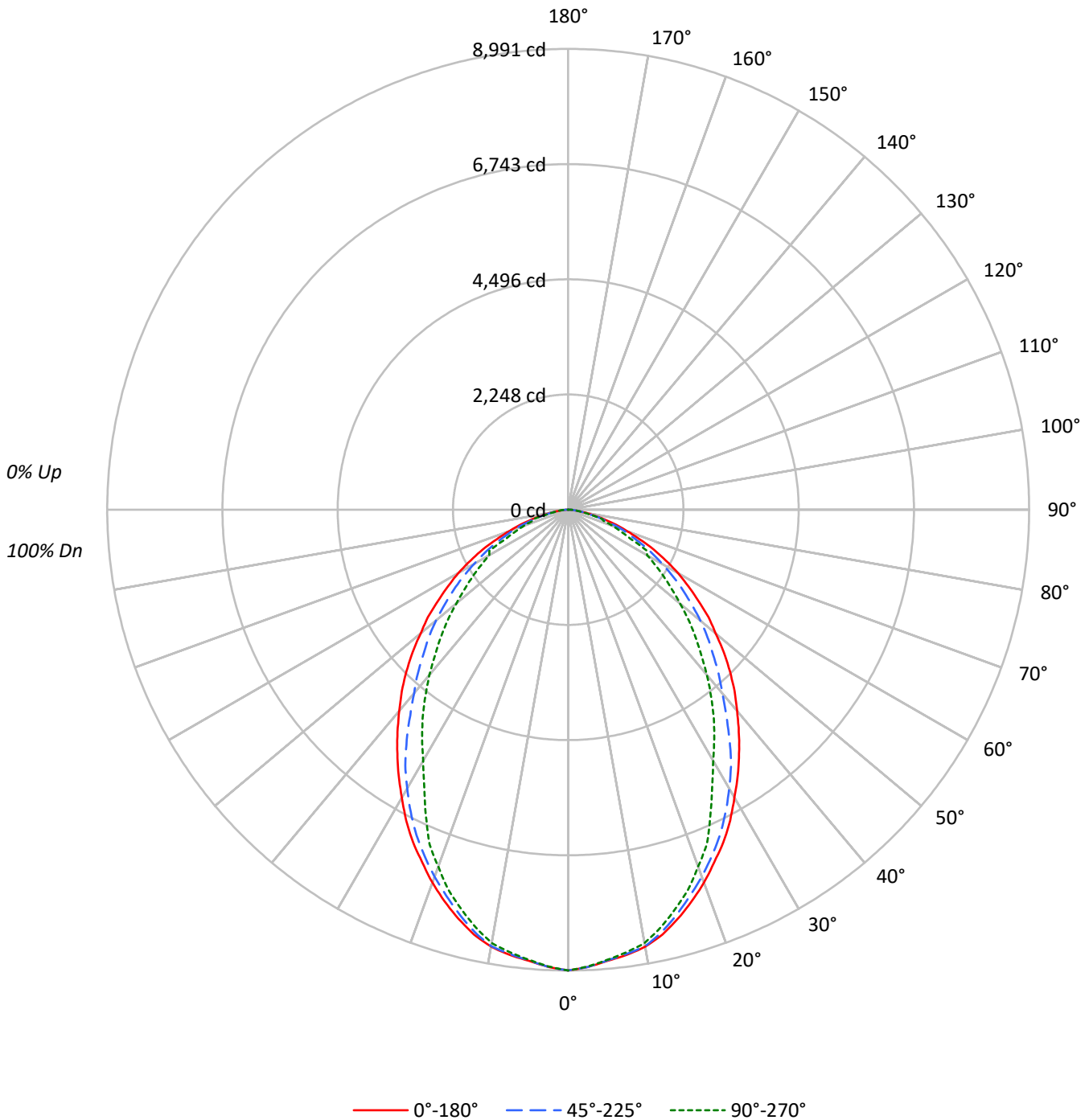
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									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°	12097	12097	12097
5°	11933	11918	11904
10°	11829	11815	11730
15°	11510	11394	11235
20°	11087	10909	10611
25°	10632	10400	9752
30°	10077	9754	8785
35°	9543	9014	8126
40°	9000	8215	7394
45°	8485	7594	6685
50°	7854	7049	5961
55°	7266	6388	5340
60°	6657	5706	4783
65°	5857	4997	4236
70°	4825	4375	3598
75°	3837	3350	3512
80°	2577	2416	2255
85°	1604	1925	2246

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8485 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	836.9	4.7
10°-20°	2296.8	13.0
20°-30°	3179.8	18.0
30°-40°	3390.6	19.2
40°-50°	3093.2	17.5
50°-60°	2423.3	13.7
60°-70°	1579.4	8.9
70°-80°	699.7	4.0
80°-90°	150.2	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°	6313.6	35.8
0°-40°	9704.2	55.0
0°-60°	15220.7	86.2
0°-90°	17650.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17650.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8991	8991	8991	8991	8991	
5°	8835	8824	8824	8814	8814	839
15°	8263	8263	8180	8097	8066	2323
25°	7161	7120	7006	6756	6569	3288
35°	5810	5769	5488	5072	4948	3632
45°	4459	4365	3991	3659	3513	3435
55°	3097	3004	2723	2401	2276	2778
65°	1840	1736	1570	1601	1330	1813
75°	738	686	644	613	676	791
85°	104	114	125	135	146	144
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8990.7	8990.7	8990.7	8990.7	8990.7
2.5°	8928.3	8928.3	8928.3	8917.9	8917.9
5°	8834.8	8824.4	8824.4	8814.0	8814.0
7.5°	8762.0	8751.6	8741.2	8730.8	8710.0
10°	8658.1	8658.1	8647.7	8595.7	8585.3
12.5°	8491.8	8481.4	8439.8	8367.0	8346.3
15°	8263.1	8263.1	8180.0	8096.8	8065.6
17.5°	8013.7	8003.3	7899.3	7816.2	7774.6
20°	7743.4	7722.6	7618.7	7483.6	7410.8
22.5°	7442.0	7442.0	7317.3	7140.6	7067.8
25°	7161.4	7119.8	7005.5	6756.0	6568.9
27.5°	6839.1	6776.8	6652.1	6298.7	6080.4
30°	6485.8	6454.6	6277.9	5820.6	5654.3
32.5°	6153.2	6101.2	5914.1	5436.0	5300.9
35°	5810.2	5768.6	5487.9	5072.2	4947.5
37.5°	5467.2	5415.2	5061.8	4729.2	4573.3
40°	5124.2	5061.8	4677.2	4375.8	4209.5
42.5°	4802.0	4718.8	4344.6	4022.4	3835.3
45°	4459.0	4365.4	3991.2	3658.6	3513.1
47.5°	4116.0	4032.8	3689.8	3346.8	3180.5
50°	3752.2	3679.4	3367.6	3024.6	2847.9
52.5°	3450.8	3336.4	3035.0	2692.0	2546.5
55°	3097.4	3003.8	2723.2	2401.0	2276.3
57.5°	2775.2	2681.6	2421.8	2120.3	2016.4
60°	2473.7	2338.6	2120.3	1860.5	1777.3
62.5°	2141.1	2037.2	1850.1	1631.8	1735.8
65°	1839.7	1735.8	1569.5	1600.7	1330.4
67.5°	1507.1	1455.1	1309.6	1164.1	1122.5
70°	1226.5	1164.1	1112.1	956.2	914.7
72.5°	977.0	914.7	841.9	758.8	727.6
75°	738.0	686.0	644.4	613.2	675.6
77.5°	509.3	488.5	457.3	426.1	415.8
80°	332.6	322.2	311.8	301.4	291.0
82.5°	197.5	197.5	197.5	197.5	197.5
85°	103.9	114.3	124.7	135.1	145.5
87.5°	62.4	62.4	72.8	83.2	93.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)