

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: P563818

Luminaire Tested: FSR-24-4-LD4-4HI-50-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563818
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-50-UNV-93-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17183.0 lumens
Efficiency: N/A
Efficacy: 99.4 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

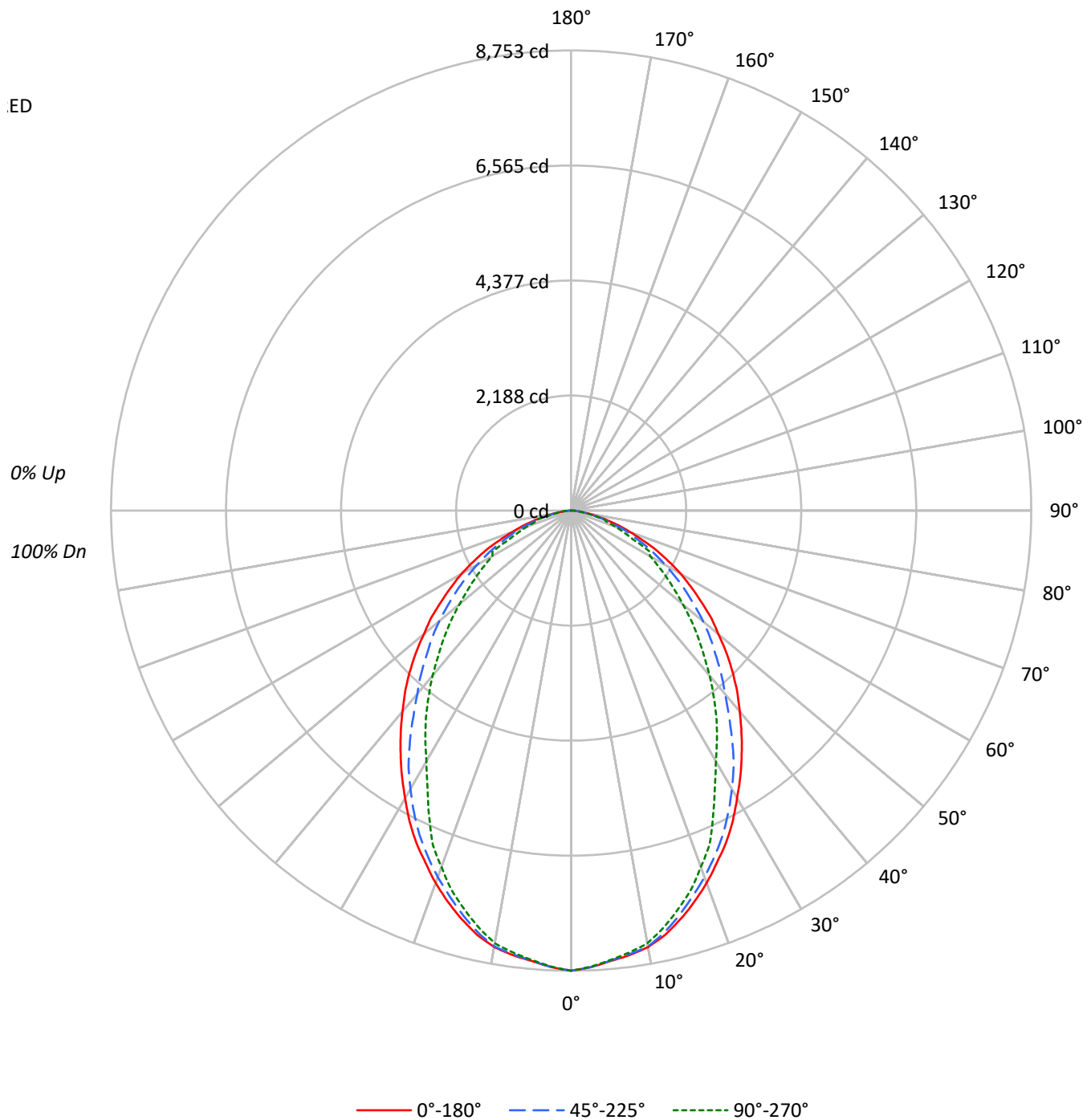
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	11777	11777	11777
5°	11617	11603	11589
10°	11516	11502	11419
15°	11206	11093	10938
20°	10794	10620	10330
25°	10350	10125	9494
30°	9810	9496	8552
35°	9291	8776	7911
40°	8762	7998	7198
45°	8260	7394	6508
50°	7646	6863	5804
55°	7073	6219	5198
60°	6481	5555	4656
65°	5702	4864	4124
70°	4697	4259	3503
75°	3735	3262	3419
80°	2509	2352	2195
85°	1562	1874	2188

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8260 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	814.8	4.7
10°-20°	2236.1	13.0
20°-30°	3095.7	18.0
30°-40°	3300.9	19.2
40°-50°	3011.4	17.5
50°-60°	2359.2	13.7
60°-70°	1537.6	8.9
70°-80°	681.2	4.0
80°-90°	146.3	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°	6146.5	35.8
0°-40°	9447.4	55.0
0°-60°	14817.9	86.2
0°-90°	17183.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17183.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8753	8753	8753	8753	8753	
5°	8601	8591	8591	8581	8581	816
15°	8044	8044	7964	7883	7852	2262
25°	6972	6931	6820	6577	6395	3201
35°	5656	5616	5343	4938	4817	3536
45°	4341	4250	3886	3562	3420	3344
55°	3015	2924	2651	2338	2216	2705
65°	1791	1690	1528	1558	1295	1765
75°	718	668	627	597	658	770
85°	101	111	121	132	142	140
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8752.8	8752.8	8752.8	8752.8	8752.8
2.5°	8692.1	8692.1	8692.1	8682.0	8682.0
5°	8601.0	8590.9	8590.9	8580.8	8580.8
7.5°	8530.2	8520.1	8509.9	8499.8	8479.6
10°	8429.0	8429.0	8418.9	8368.3	8358.2
12.5°	8267.1	8257.0	8216.5	8145.7	8125.4
15°	8044.5	8044.5	7963.5	7882.6	7852.2
17.5°	7801.6	7791.5	7690.3	7609.4	7568.9
20°	7538.5	7518.3	7417.1	7285.6	7214.7
22.5°	7245.1	7245.1	7123.7	6951.6	6880.8
25°	6971.9	6931.4	6820.1	6577.2	6395.1
27.5°	6658.2	6597.5	6476.1	6132.0	5919.5
30°	6314.2	6283.8	6111.8	5666.5	5504.6
32.5°	5990.3	5939.8	5757.6	5292.1	5160.6
35°	5656.4	5616.0	5342.7	4938.0	4816.6
37.5°	5322.5	5271.9	4927.9	4604.1	4452.3
40°	4988.6	4927.9	4553.5	4260.0	4098.1
42.5°	4674.9	4594.0	4229.7	3916.0	3733.8
45°	4341.0	4249.9	3885.6	3561.8	3420.2
47.5°	4007.1	3926.1	3592.2	3258.3	3096.4
50°	3652.9	3582.1	3278.5	2944.6	2772.6
52.5°	3359.5	3248.1	2954.7	2620.8	2479.1
55°	3015.4	2924.3	2651.1	2337.5	2216.0
57.5°	2701.7	2610.7	2357.7	2064.2	1963.1
60°	2408.3	2276.7	2064.2	1811.3	1730.3
62.5°	2084.5	1983.3	1801.2	1588.7	1689.8
65°	1791.0	1689.8	1527.9	1558.3	1295.2
67.5°	1467.2	1416.6	1275.0	1133.3	1092.8
70°	1194.0	1133.3	1082.7	930.9	890.5
72.5°	951.2	890.5	819.6	738.7	708.3
75°	718.4	667.8	627.4	597.0	657.7
77.5°	495.8	475.6	445.2	414.9	404.8
80°	323.8	313.7	303.6	293.4	283.3
82.5°	192.3	192.3	192.3	192.3	192.3
85°	101.2	111.3	121.4	131.5	141.7
87.5°	60.7	60.7	70.8	81.0	91.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)