

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: P563683

Luminaire Tested: FSR-24-4-LD4-4HI-35-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563683
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-93-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18804.0 lumens
Efficiency: N/A
Efficacy: 108.8 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

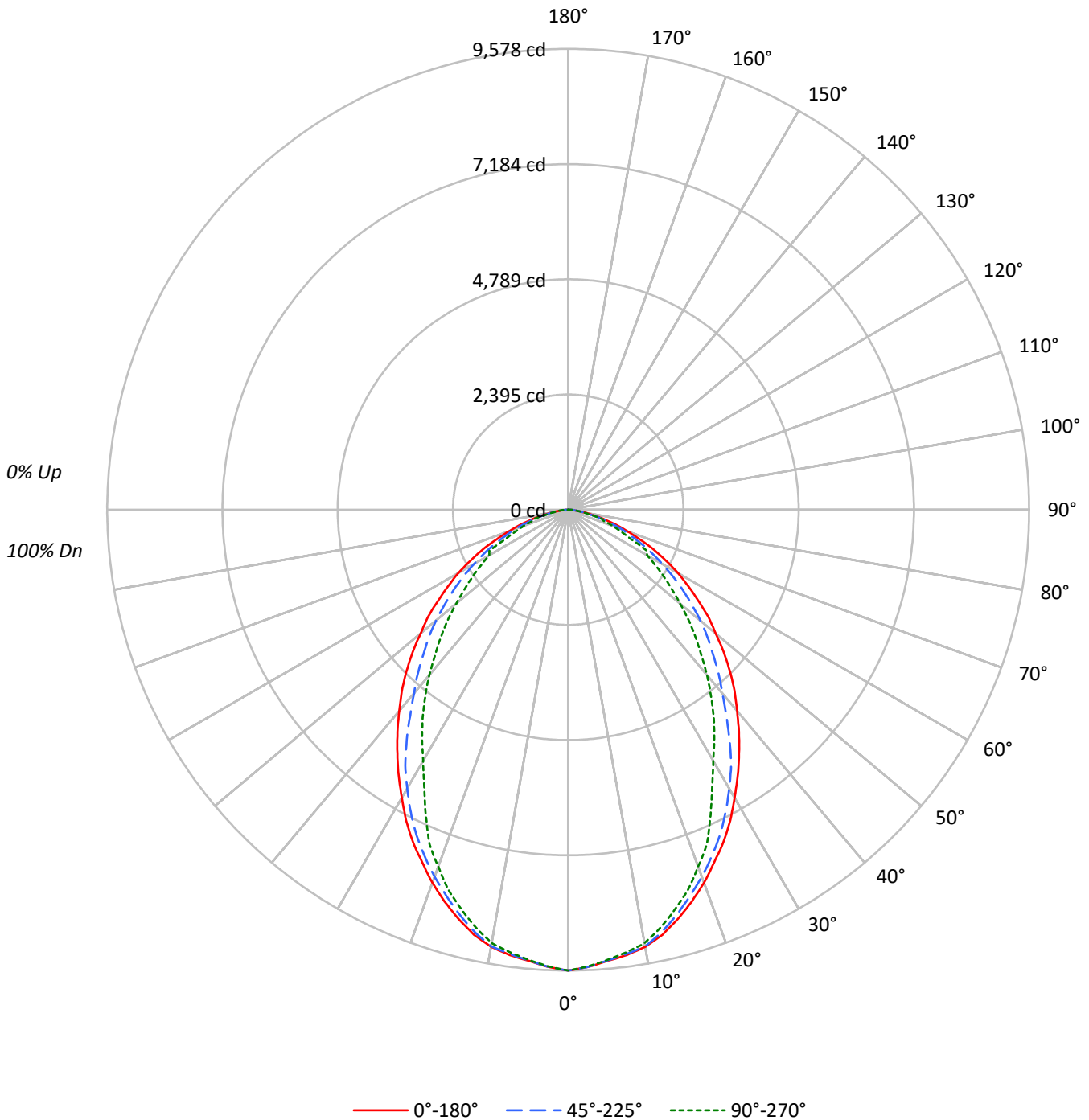
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563683

CATALOG NUMBER: FSR-24-4-LD4-4HI-35-UNV-93-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P563683

CATALOG NUMBER: FSR-24-4-LD4-4HI-35-UNV-93-85-EDD

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°	12888	12888	12888
5°	12713	12698	12683
10°	12603	12587	12497
15°	12263	12139	11970
20°	11812	11622	11305
25°	11327	11080	10390
30°	10735	10391	9359
35°	10167	9604	8658
40°	9589	8752	7877
45°	9039	8091	7122
50°	8368	7510	6351
55°	7741	6806	5689
60°	7092	6079	5096
65°	6240	5323	4513
70°	5140	4661	3834
75°	4087	3569	3742
80°	2745	2574	2403
85°	1709	2052	2393

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9039 cd/sqm



TEST NUMBER: P563683

CATALOG NUMBER: FSR-24-4-LD4-4HI-35-UNV-93-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	891.6	4.7
10°-20°	2447.0	13.0
20°-30°	3387.7	18.0
30°-40°	3612.3	19.2
40°-50°	3295.5	17.5
50°-60°	2581.7	13.7
60°-70°	1682.7	8.9
70°-80°	745.5	4.0
80°-90°	160.1	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°	6726.3	35.8
0°-40°	10338.6	55.0
0°-60°	16215.8	86.2
0°-90°	18804.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18804.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9578	9578	9578	9578	9578	
5°	9412	9401	9401	9390	9390	893
15°	8803	8803	8715	8626	8593	2475
25°	7630	7585	7464	7198	6998	3503
35°	6190	6146	5847	5404	5271	3870
45°	4750	4651	4252	3898	3743	3659
55°	3300	3200	2901	2558	2425	2960
65°	1960	1849	1672	1705	1417	1932
75°	786	731	687	653	720	843
85°	111	122	133	144	155	154
90°	0	0	0	0	0	



TEST NUMBER: P563683

CATALOG NUMBER: FSR-24-4-LD4-4HI-35-UNV-93-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9578.5	9578.5	9578.5	9578.5	9578.5
2.5°	9512.1	9512.1	9512.1	9501.0	9501.0
5°	9412.4	9401.3	9401.3	9390.3	9390.3
7.5°	9334.9	9323.8	9312.7	9301.7	9279.5
10°	9224.2	9224.2	9213.1	9157.7	9146.6
12.5°	9047.0	9035.9	8991.6	8914.1	8892.0
15°	8803.4	8803.4	8714.8	8626.2	8593.0
17.5°	8537.6	8526.5	8415.8	8327.2	8282.9
20°	8249.7	8227.5	8116.8	7972.9	7895.3
22.5°	7928.6	7928.6	7795.7	7607.4	7529.9
25°	7629.6	7585.3	7463.5	7197.7	6998.4
27.5°	7286.3	7219.9	7087.0	6710.5	6477.9
30°	6909.8	6876.6	6688.3	6201.1	6023.9
32.5°	6555.5	6500.1	6300.8	5791.4	5647.4
35°	6190.0	6145.7	5846.8	5403.8	5270.9
37.5°	5824.6	5769.3	5392.8	5038.4	4872.3
40°	5459.2	5392.8	4983.0	4661.9	4484.7
42.5°	5115.9	5027.3	4628.7	4285.4	4086.1
45°	4750.5	4650.8	4252.2	3897.8	3742.8
47.5°	4385.1	4296.5	3931.1	3565.6	3388.5
50°	3997.5	3920.0	3587.8	3222.4	3034.1
52.5°	3676.4	3554.6	3233.4	2868.0	2713.0
55°	3299.9	3200.2	2901.2	2558.0	2425.1
57.5°	2956.6	2856.9	2580.1	2259.0	2148.2
60°	2635.5	2491.5	2259.0	1982.1	1893.6
62.5°	2281.1	2170.4	1971.1	1738.5	1849.3
65°	1960.0	1849.3	1672.1	1705.3	1417.4
67.5°	1605.6	1550.3	1395.3	1240.2	1195.9
70°	1306.7	1240.2	1184.9	1018.8	974.5
72.5°	1040.9	974.5	896.9	808.4	775.1
75°	786.2	730.8	686.6	653.3	719.8
77.5°	542.6	520.5	487.2	454.0	442.9
80°	354.3	343.3	332.2	321.1	310.1
82.5°	210.4	210.4	210.4	210.4	210.4
85°	110.7	121.8	132.9	144.0	155.0
87.5°	66.4	66.4	77.5	88.6	99.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)