

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: P563619

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563619
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-LD4-3STD-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11810.0 lumens
Efficiency: N/A
Efficacy: 118.2 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

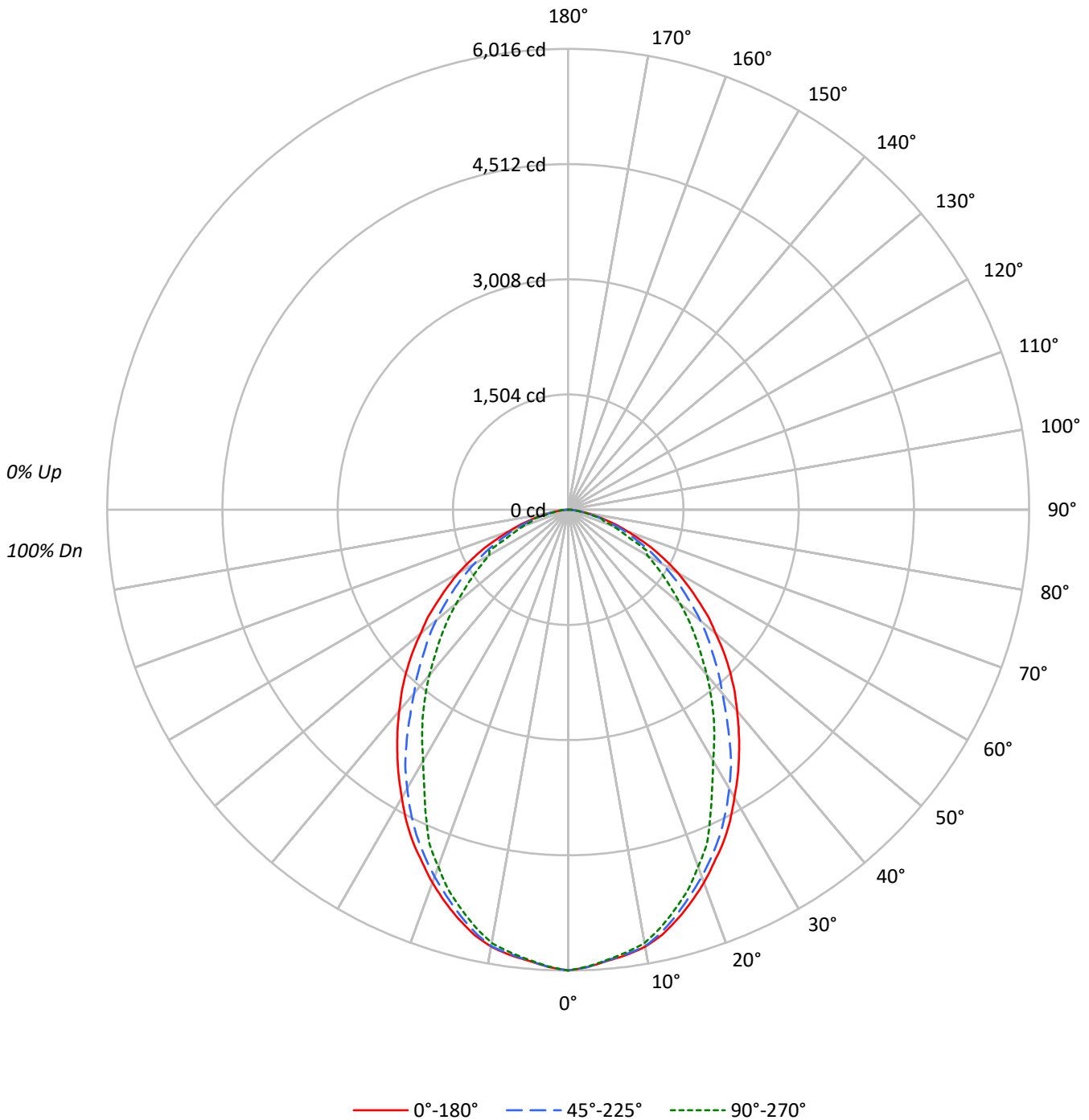
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563619

CATALOG NUMBER: FSR-24-4-LD4-3STD-50-UNV-93-85-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P563619

CATALOG NUMBER: FSR-24-4-LD4-3STD-50-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°	8094	8094	8094
5°	7984	7975	7965
10°	7915	7906	7849
15°	7702	7624	7518
20°	7419	7299	7100
25°	7114	6959	6525
30°	6742	6526	5878
35°	6386	6032	5438
40°	6022	5497	4947
45°	5677	5082	4473
50°	5255	4717	3989
55°	4862	4274	3573
60°	4454	3818	3200
65°	3919	3344	2834
70°	3229	2928	2408
75°	2567	2242	2350
80°	1725	1616	1509
85°	1073	1289	1504

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5677 cd/sqm



TEST NUMBER: P563619

CATALOG NUMBER: FSR-24-4-LD4-3STD-50-UNV-93-85-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	560.0	4.7
10°-20°	1536.9	13.0
20°-30°	2127.7	18.0
30°-40°	2268.7	19.2
40°-50°	2069.7	17.5
50°-60°	1621.5	13.7
60°-70°	1056.8	8.9
70°-80°	468.2	4.0
80°-90°	100.5	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°	4224.5	35.8
0°-40°	6493.3	55.0
0°-60°	10184.5	86.2
0°-90°	11810.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11810.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6016	6016	6016	6016	6016	
5°	5912	5905	5905	5898	5898	561
15°	5529	5529	5473	5418	5397	1554
25°	4792	4764	4688	4521	4395	2200
35°	3888	3860	3672	3394	3310	2431
45°	2984	2921	2671	2448	2351	2298
55°	2072	2010	1822	1606	1523	1859
65°	1231	1161	1050	1071	890	1213
75°	494	459	431	410	452	529
85°	70	76	84	90	97	96
90°	0	0	0	0	0	



TEST NUMBER: P563619

CATALOG NUMBER: FSR-24-4-LD4-3STD-50-UNV-93-85-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6015.9	6015.9	6015.9	6015.9	6015.9
2.5°	5974.1	5974.1	5974.1	5967.2	5967.2
5°	5911.5	5904.6	5904.6	5897.6	5897.6
7.5°	5862.9	5855.9	5848.9	5842.0	5828.1
10°	5793.3	5793.3	5786.3	5751.6	5744.6
12.5°	5682.0	5675.1	5647.3	5598.6	5584.7
15°	5529.0	5529.0	5473.4	5417.7	5396.9
17.5°	5362.1	5355.2	5285.6	5230.0	5202.2
20°	5181.3	5167.4	5097.8	5007.4	4958.7
22.5°	4979.6	4979.6	4896.1	4777.9	4729.2
25°	4791.8	4764.0	4687.5	4520.6	4395.4
27.5°	4576.2	4534.5	4451.0	4214.6	4068.5
30°	4339.8	4318.9	4200.7	3894.7	3783.4
32.5°	4117.2	4082.4	3957.3	3637.3	3546.9
35°	3887.7	3859.9	3672.1	3393.9	3310.5
37.5°	3658.2	3623.4	3387.0	3164.4	3060.1
40°	3428.7	3387.0	3129.6	2927.9	2816.7
42.5°	3213.1	3157.5	2907.1	2691.5	2566.3
45°	2983.6	2921.0	2670.6	2448.1	2350.7
47.5°	2754.1	2698.4	2468.9	2239.4	2128.2
50°	2510.7	2462.0	2253.3	2023.8	1905.6
52.5°	2309.0	2232.5	2030.8	1801.3	1703.9
55°	2072.5	2009.9	1822.1	1606.5	1523.1
57.5°	1856.9	1794.3	1620.5	1418.8	1349.2
60°	1655.2	1564.8	1418.8	1244.9	1189.3
62.5°	1432.7	1363.1	1237.9	1091.9	1161.4
65°	1231.0	1161.4	1050.2	1071.0	890.2
67.5°	1008.4	973.7	876.3	778.9	751.1
70°	820.7	778.9	744.2	639.8	612.0
72.5°	653.7	612.0	563.3	507.7	486.8
75°	493.8	459.0	431.2	410.3	452.1
77.5°	340.8	326.9	306.0	285.1	278.2
80°	222.6	215.6	208.6	201.7	194.7
82.5°	132.1	132.1	132.1	132.1	132.1
85°	69.5	76.5	83.5	90.4	97.4
87.5°	41.7	41.7	48.7	55.6	62.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)