

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: P563966

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-80-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563966
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-LD4-4LO-50-UNV-80-97-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9954.0 lumens
Efficiency: N/A
Efficacy: 106.3 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

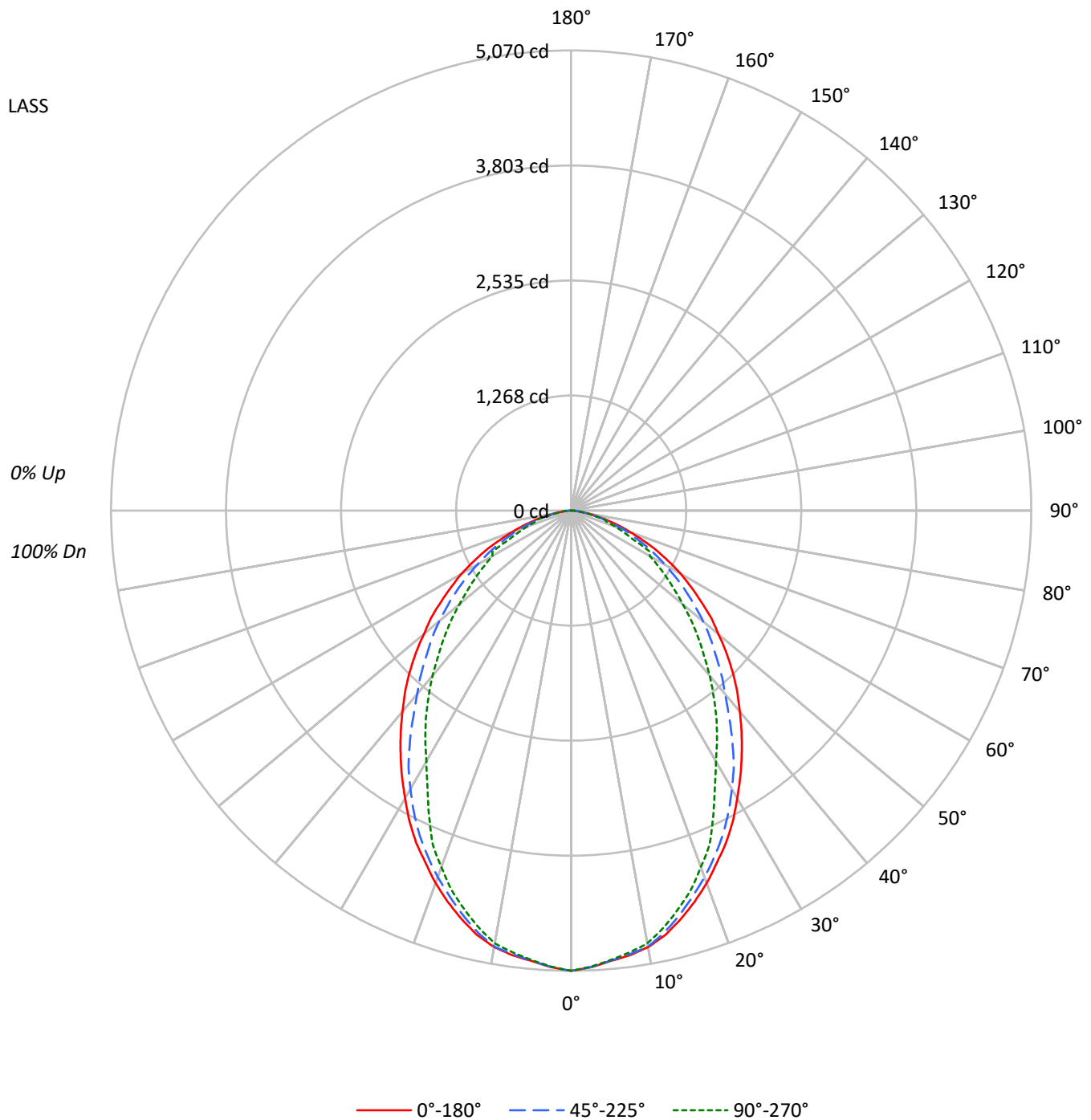
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P563966

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-80-97-EDD-90

Luminous Intensity Polar Plot





TEST NUMBER: P563966

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-80-97-EDD-90

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°	6822	6822	6822
5°	6730	6722	6714
10°	6671	6663	6615
15°	6491	6426	6336
20°	6253	6152	5984
25°	5996	5865	5500
30°	5683	5501	4954
35°	5382	5084	4583
40°	5076	4633	4170
45°	4785	4283	3770
50°	4429	3975	3362
55°	4098	3603	3011
60°	3754	3218	2697
65°	3303	2818	2389
70°	2721	2467	2029
75°	2164	1889	1981
80°	1454	1363	1272
85°	905	1085	1267

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4785 cd/sqm



TEST NUMBER: P563966

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-80-97-EDD-90

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	472.0	4.7
10°-20°	1295.3	13.0
20°-30°	1793.3	18.0
30°-40°	1912.2	19.2
40°-50°	1744.5	17.5
50°-60°	1366.7	13.7
60°-70°	890.7	8.9
70°-80°	394.6	4.0
80°-90°	84.7	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°	3560.6	35.8
0°-40°	5472.8	55.0
0°-60°	8583.9	86.2
0°-90°	9954.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9954.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5070	5070	5070	5070	5070	
5°	4982	4977	4977	4971	4971	473
15°	4660	4660	4613	4566	4549	1310
25°	4039	4015	3951	3810	3705	1854
35°	3277	3253	3095	2860	2790	2049
45°	2515	2462	2251	2063	1981	1937
55°	1747	1694	1536	1354	1284	1567
65°	1038	979	885	903	750	1022
75°	416	387	363	346	381	446
85°	59	64	70	76	82	81
90°	0	0	0	0	0	



TEST NUMBER: P563966

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-80-97-EDD-90

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5070.4	5070.4	5070.4	5070.4	5070.4
2.5°	5035.3	5035.3	5035.3	5029.4	5029.4
5°	4982.5	4976.6	4976.6	4970.8	4970.8
7.5°	4941.5	4935.6	4929.8	4923.9	4912.2
10°	4882.9	4882.9	4877.0	4847.7	4841.8
12.5°	4789.1	4783.2	4759.8	4718.7	4707.0
15°	4660.1	4660.1	4613.2	4566.3	4548.7
17.5°	4519.4	4513.6	4454.9	4408.1	4384.6
20°	4367.0	4355.3	4296.7	4220.5	4179.4
22.5°	4197.0	4197.0	4126.7	4027.0	3986.0
25°	4038.8	4015.3	3950.8	3810.2	3704.6
27.5°	3857.0	3821.9	3751.5	3552.2	3429.1
30°	3657.7	3640.2	3540.5	3282.6	3188.8
32.5°	3470.2	3440.9	3335.3	3065.7	2989.5
35°	3276.7	3253.3	3095.0	2860.5	2790.2
37.5°	3083.3	3054.0	2854.7	2667.1	2579.2
40°	2889.9	2854.7	2637.8	2467.8	2374.0
42.5°	2708.1	2661.2	2450.2	2268.5	2163.0
45°	2514.7	2461.9	2250.9	2063.3	1981.3
47.5°	2321.3	2274.4	2080.9	1887.5	1793.7
50°	2116.1	2075.1	1899.2	1705.8	1606.1
52.5°	1946.1	1881.6	1711.6	1518.2	1436.1
55°	1746.8	1694.1	1535.8	1354.1	1283.7
57.5°	1565.1	1512.3	1365.8	1195.8	1137.2
60°	1395.1	1318.9	1195.8	1049.3	1002.4
62.5°	1207.5	1148.9	1043.4	920.3	978.9
65°	1037.5	978.9	885.1	902.7	750.3
67.5°	850.0	820.6	738.6	656.5	633.1
70°	691.7	656.5	627.2	539.3	515.8
72.5°	551.0	515.8	474.8	427.9	410.3
75°	416.2	386.9	363.4	345.8	381.0
77.5°	287.2	275.5	257.9	240.3	234.5
80°	187.6	181.7	175.9	170.0	164.1
82.5°	111.4	111.4	111.4	111.4	111.4
85°	58.6	64.5	70.3	76.2	82.1
87.5°	35.2	35.2	41.0	46.9	52.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)