

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: P563991

Luminaire Tested: FSR-24-4-LD4-4LO-50-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563991
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-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

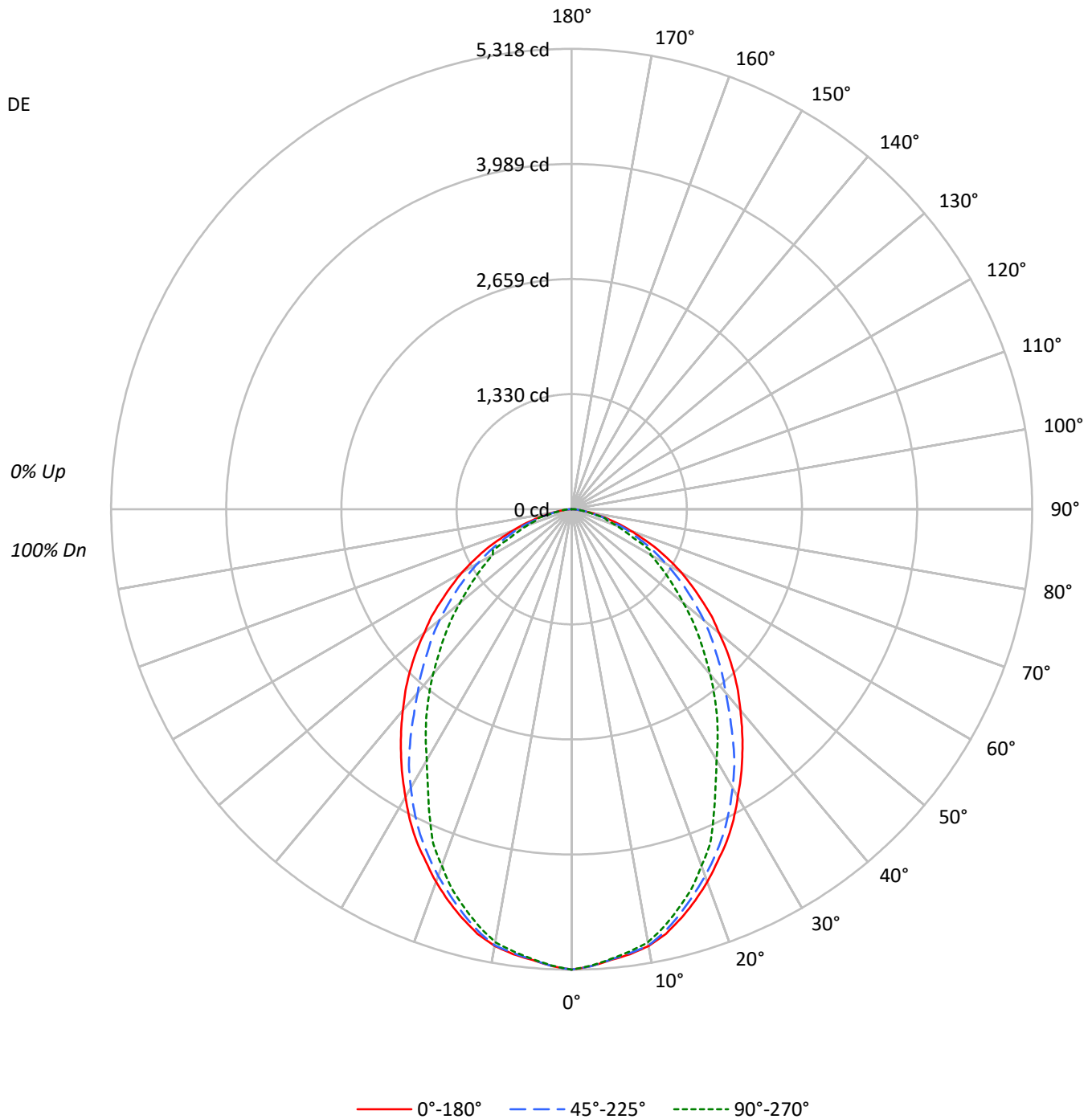
Lumens per Lamp: N/A
Luminaire Lumens: 10440.0 lumens
Efficiency: N/A
Efficacy: 111.5 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P563991
CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-82-87-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P563991

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-82-87-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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7155	7155	7155
5°	7058	7050	7042
10°	6997	6988	6938
15°	6808	6740	6646
20°	6558	6453	6276
25°	6289	6152	5768
30°	5960	5769	5196
35°	5645	5332	4807
40°	5324	4859	4373
45°	5019	4492	3954
50°	4646	4169	3526
55°	4298	3779	3158
60°	3937	3375	2829
65°	3465	2955	2505
70°	2854	2588	2128
75°	2269	1982	2077
80°	1524	1429	1333
85°	949	1139	1329

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5019 cd/sqm



TEST NUMBER: P563991

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-82-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	495.0	4.7
10°-20°	1358.6	13.0
20°-30°	1880.9	18.0
30°-40°	2005.5	19.2
40°-50°	1829.6	17.5
50°-60°	1433.4	13.7
60°-70°	934.2	8.9
70°-80°	413.9	4.0
80°-90°	88.9	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°	3734.5	35.8
0°-40°	5740.0	55.0
0°-60°	9003.0	86.2
0°-90°	10440.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10440.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5318	5318	5318	5318	5318	
5°	5226	5220	5220	5214	5214	496
15°	4888	4888	4838	4789	4771	1374
25°	4236	4211	4144	3996	3886	1945
35°	3437	3412	3246	3000	2926	2149
45°	2638	2582	2361	2164	2078	2032
55°	1832	1777	1611	1420	1346	1643
65°	1088	1027	928	947	787	1072
75°	436	406	381	363	400	468
85°	62	68	74	80	86	85
90°	0	0	0	0	0	



TEST NUMBER: P563991

CATALOG NUMBER: FSR-24-4-LD4-4LO-50-UNV-82-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5318.0	5318.0	5318.0	5318.0	5318.0
2.5°	5281.1	5281.1	5281.1	5275.0	5275.0
5°	5225.8	5219.6	5219.6	5213.5	5213.5
7.5°	5182.7	5176.6	5170.4	5164.3	5152.0
10°	5121.3	5121.3	5115.1	5084.4	5078.2
12.5°	5022.9	5016.7	4992.2	4949.1	4936.8
15°	4887.6	4887.6	4838.5	4789.3	4770.8
17.5°	4740.1	4733.9	4672.5	4623.3	4598.7
20°	4580.2	4567.9	4506.5	4426.5	4383.5
22.5°	4401.9	4401.9	4328.2	4223.7	4180.6
25°	4236.0	4211.4	4143.7	3996.2	3885.5
27.5°	4045.4	4008.5	3934.7	3725.7	3596.6
30°	3836.3	3817.9	3713.4	3442.9	3344.5
32.5°	3639.6	3608.9	3498.2	3215.4	3135.5
35°	3436.7	3412.1	3246.1	3000.2	2926.4
37.5°	3233.8	3203.1	2994.1	2797.3	2705.1
40°	3031.0	2994.1	2766.6	2588.3	2489.9
42.5°	2840.4	2791.2	2569.9	2379.3	2268.6
45°	2637.5	2582.1	2360.8	2164.1	2078.0
47.5°	2434.6	2385.4	2182.5	1979.6	1881.3
50°	2219.4	2176.4	1991.9	1789.1	1684.5
52.5°	2041.1	1973.5	1795.2	1592.3	1506.3
55°	1832.1	1776.8	1610.8	1420.2	1346.4
57.5°	1641.5	1586.2	1432.5	1254.2	1192.7
60°	1463.2	1383.3	1254.2	1100.5	1051.3
62.5°	1266.5	1205.0	1094.3	965.2	1026.7
65°	1088.2	1026.7	928.3	946.8	786.9
67.5°	891.5	860.7	774.6	688.6	664.0
70°	725.5	688.6	657.8	565.6	541.0
72.5°	577.9	541.0	498.0	448.8	430.4
75°	436.5	405.8	381.2	362.7	399.6
77.5°	301.3	289.0	270.5	252.1	245.9
80°	196.7	190.6	184.4	178.3	172.1
82.5°	116.8	116.8	116.8	116.8	116.8
85°	61.5	67.6	73.8	79.9	86.1
87.5°	36.9	36.9	43.0	49.2	55.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)