

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: P561651

Luminaire Tested: FSR-12-4-LD4-2LO-50-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561651
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-12-4-LD4-2LO-50-UNV-80-85-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRONM
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

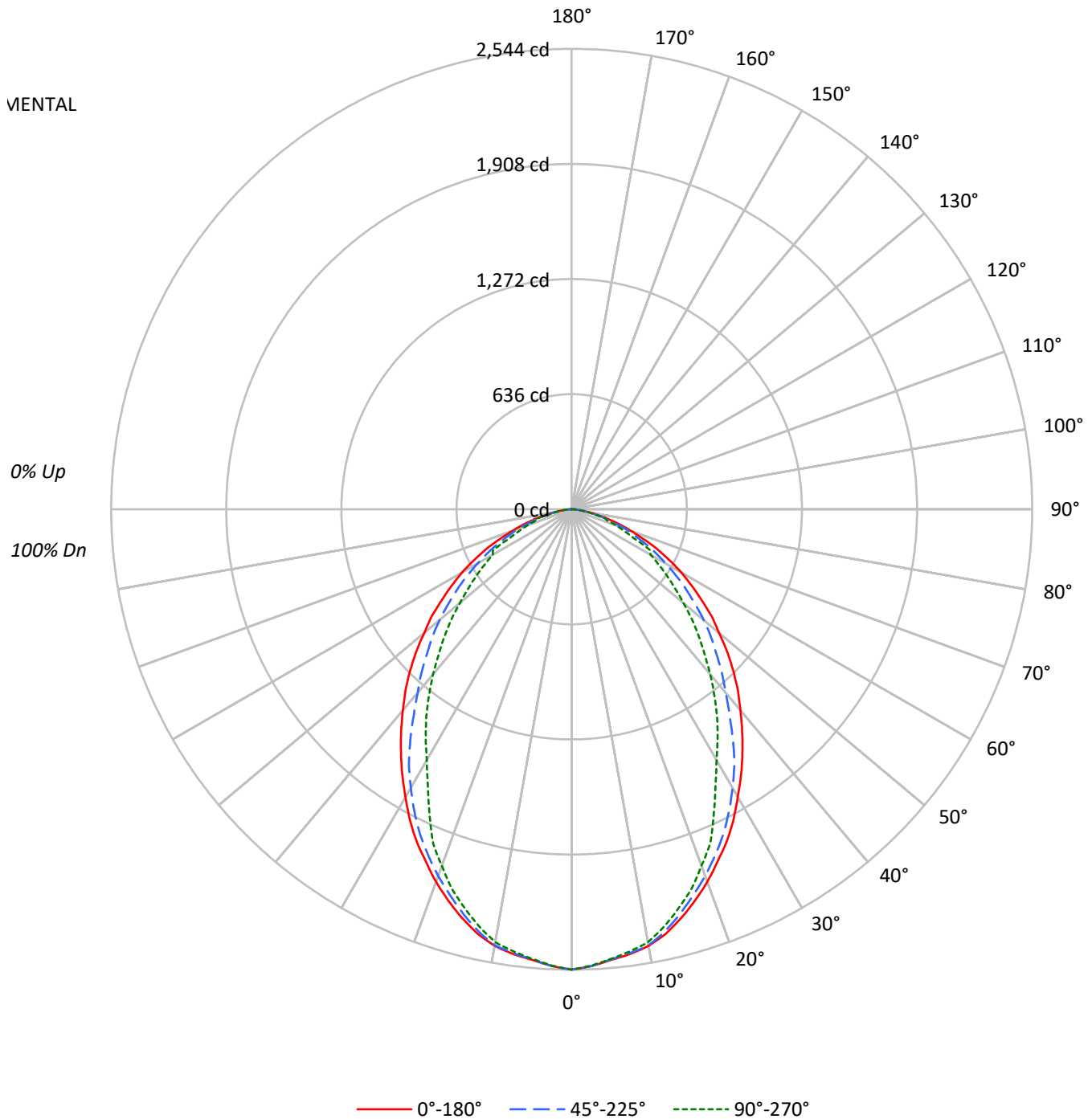
Lumens per Lamp: N/A
Luminaire Lumens: 4994.0 lumens
Efficiency: N/A
Efficacy: 106.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	6846	6846	6846
5°	6753	6745	6737
10°	6694	6686	6638
15°	6513	6448	6358
20°	6274	6173	6005
25°	6016	5885	5518
30°	5702	5519	4971
35°	5401	5101	4599
40°	5093	4649	4184
45°	4801	4298	3783
50°	4445	3989	3373
55°	4112	3615	3022
60°	3767	3229	2707
65°	3314	2828	2397
70°	2730	2476	2036
75°	2171	1895	1988
80°	1458	1367	1275
85°	908	1090	1272

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4801 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	236.8	4.7
10°-20°	649.9	13.0
20°-30°	899.7	18.0
30°-40°	959.4	19.2
40°-50°	875.2	17.5
50°-60°	685.7	13.7
60°-70°	446.9	8.9
70°-80°	198.0	4.0
80°-90°	42.5	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°	1786.4	35.8
0°-40°	2745.8	55.0
0°-60°	4306.6	86.2
0°-90°	4994.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4994.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2544	2544	2544	2544	2544	
5°	2500	2497	2497	2494	2494	237
15°	2338	2338	2314	2291	2282	657
25°	2026	2014	1982	1912	1859	930
35°	1644	1632	1553	1435	1400	1028
45°	1262	1235	1129	1035	994	972
55°	876	850	770	679	644	786
65°	520	491	444	453	376	513
75°	209	194	182	174	191	224
85°	29	32	35	38	41	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2543.9	2543.9	2543.9	2543.9	2543.9
2.5°	2526.2	2526.2	2526.2	2523.3	2523.3
5°	2499.8	2496.8	2496.8	2493.9	2493.9
7.5°	2479.2	2476.2	2473.3	2470.4	2464.5
10°	2449.8	2449.8	2446.8	2432.1	2429.2
12.5°	2402.7	2399.8	2388.0	2367.4	2361.5
15°	2338.0	2338.0	2314.5	2291.0	2282.1
17.5°	2267.4	2264.5	2235.1	2211.6	2199.8
20°	2191.0	2185.1	2155.7	2117.4	2096.9
22.5°	2105.7	2105.7	2070.4	2020.4	1999.8
25°	2026.3	2014.5	1982.2	1911.6	1858.6
27.5°	1935.1	1917.5	1882.2	1782.2	1720.4
30°	1835.1	1826.3	1776.3	1646.9	1599.8
32.5°	1741.0	1726.3	1673.4	1538.1	1499.9
35°	1644.0	1632.2	1552.8	1435.2	1399.9
37.5°	1546.9	1532.2	1432.2	1338.1	1294.0
40°	1449.9	1432.2	1323.4	1238.1	1191.1
42.5°	1358.7	1335.2	1229.3	1138.1	1085.2
45°	1261.6	1235.2	1129.3	1035.2	994.0
47.5°	1164.6	1141.1	1044.0	947.0	899.9
50°	1061.7	1041.1	952.9	855.8	805.8
52.5°	976.4	944.0	858.7	761.7	720.5
55°	876.4	849.9	770.5	679.3	644.1
57.5°	785.2	758.8	685.2	599.9	570.5
60°	699.9	661.7	599.9	526.4	502.9
62.5°	605.8	576.4	523.5	461.7	491.1
65°	520.5	491.1	444.1	452.9	376.4
67.5°	426.4	411.7	370.6	329.4	317.6
70°	347.0	329.4	314.7	270.6	258.8
72.5°	276.4	258.8	238.2	214.7	205.9
75°	208.8	194.1	182.3	173.5	191.2
77.5°	144.1	138.2	129.4	120.6	117.6
80°	94.1	91.2	88.2	85.3	82.3
82.5°	55.9	55.9	55.9	55.9	55.9
85°	29.4	32.3	35.3	38.2	41.2
87.5°	17.6	17.6	20.6	23.5	26.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)