

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: P563187

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-80-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563187
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-LD4-3HI-50-UNV-80-85-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

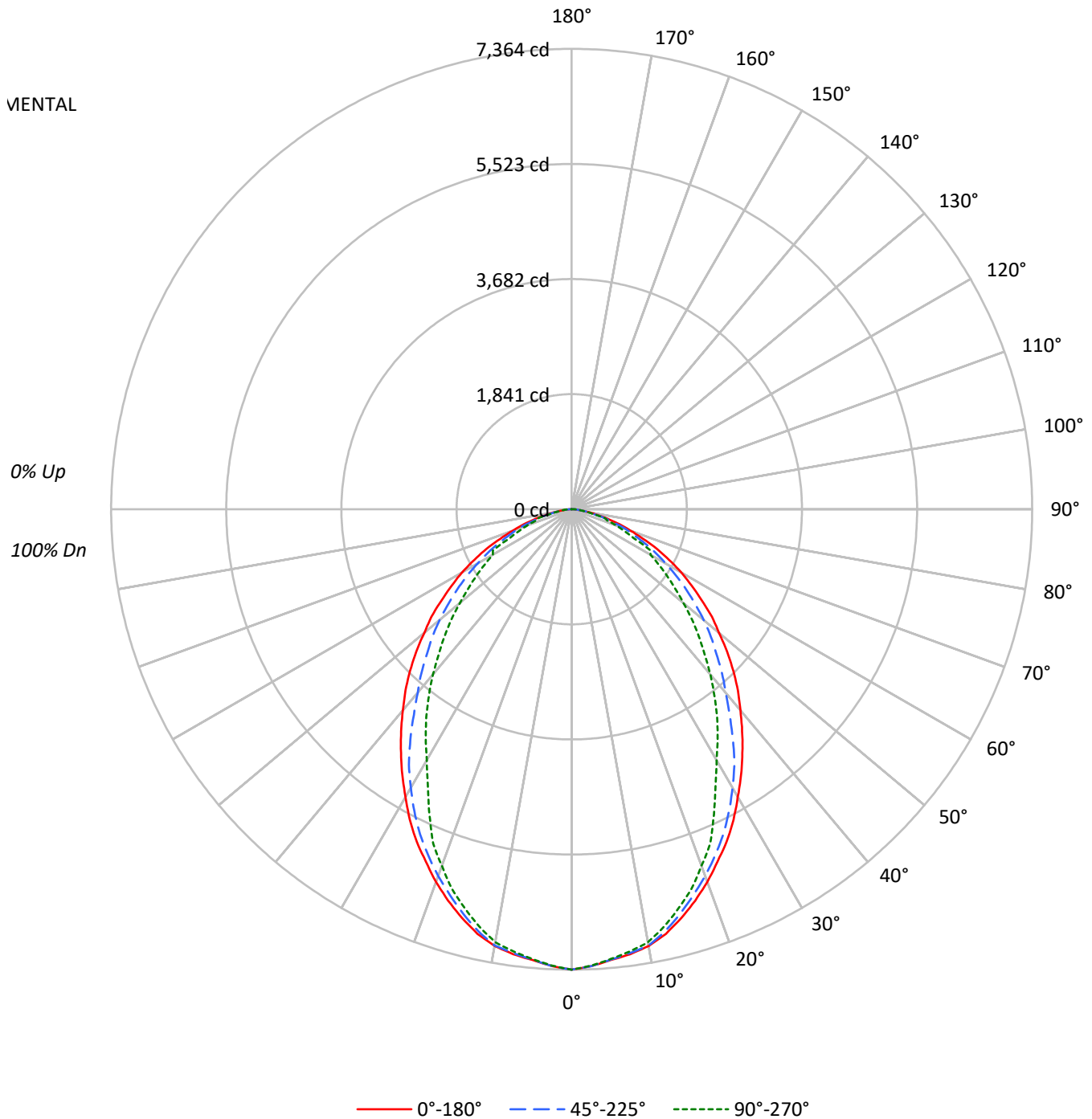
Lumens per Lamp: N/A
Luminaire Lumens: 14457.0 lumens
Efficiency: N/A
Efficacy: 111.6 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 129.6
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



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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	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°	9908	9908	9908
5°	9774	9762	9751
10°	9689	9678	9608
15°	9428	9333	9203
20°	9082	8935	8691
25°	8708	8519	7988
30°	8254	7989	7196
35°	7817	7383	6656
40°	7372	6729	6056
45°	6950	6221	5476
50°	6433	5774	4883
55°	5951	5232	4374
60°	5452	4674	3918
65°	4798	4093	3469
70°	3952	3583	2947
75°	3143	2744	2877
80°	2111	1979	1847
85°	1314	1578	1840

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6950 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	685.5	4.7
10°-20°	1881.3	13.0
20°-30°	2604.6	18.0
30°-40°	2777.2	19.2
40°-50°	2533.6	17.5
50°-60°	1984.9	13.7
60°-70°	1293.7	8.9
70°-80°	573.1	4.0
80°-90°	123.1	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°	5171.4	35.8
0°-40°	7948.6	55.0
0°-60°	12467.1	86.2
0°-90°	14457.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14457.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	7364	7364	7364	7364	7364	
5°	7236	7228	7228	7220	7220	687
15°	6768	6768	6700	6632	6606	1903
25°	5866	5832	5738	5534	5381	2693
35°	4759	4725	4495	4155	4052	2975
45°	3652	3576	3269	2997	2878	2813
55°	2537	2460	2230	1967	1864	2276
65°	1507	1422	1286	1311	1090	1485
75°	604	562	528	502	553	648
85°	85	94	102	111	119	118
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	7364.2	7364.2	7364.2	7364.2	7364.2
2.5°	7313.1	7313.1	7313.1	7304.6	7304.6
5°	7236.5	7228.0	7228.0	7219.5	7219.5
7.5°	7176.9	7168.4	7159.9	7151.4	7134.3
10°	7091.8	7091.8	7083.3	7040.7	7032.2
12.5°	6955.6	6947.0	6913.0	6853.4	6836.4
15°	6768.3	6768.3	6700.1	6632.0	6606.5
17.5°	6563.9	6555.4	6470.3	6402.2	6368.1
20°	6342.6	6325.6	6240.4	6129.7	6070.1
22.5°	6095.7	6095.7	5993.5	5848.8	5789.2
25°	5865.8	5831.8	5738.1	5533.8	5380.6
27.5°	5601.9	5550.8	5448.7	5159.2	4980.4
30°	5312.4	5286.9	5142.2	4767.6	4631.4
32.5°	5040.0	4997.4	4844.2	4452.6	4341.9
35°	4759.1	4725.0	4495.1	4154.6	4052.4
37.5°	4478.1	4435.5	4146.1	3873.7	3746.0
40°	4197.2	4146.1	3831.1	3584.2	3448.0
42.5°	3933.3	3865.1	3558.7	3294.7	3141.5
45°	3652.3	3575.7	3269.2	2996.8	2877.6
47.5°	3371.4	3303.2	3022.3	2741.4	2605.1
50°	3073.4	3013.8	2758.4	2477.4	2332.7
52.5°	2826.5	2732.8	2486.0	2205.0	2085.8
55°	2537.0	2460.4	2230.5	1966.6	1864.5
57.5°	2273.1	2196.5	1983.7	1736.8	1651.6
60°	2026.2	1915.5	1736.8	1523.9	1455.8
62.5°	1753.8	1668.7	1515.4	1336.6	1421.8
65°	1506.9	1421.8	1285.5	1311.1	1089.7
67.5°	1234.5	1191.9	1072.7	953.5	919.5
70°	1004.6	953.5	910.9	783.2	749.2
72.5°	800.3	749.2	689.6	621.5	595.9
75°	604.5	561.9	527.8	502.3	553.4
77.5°	417.2	400.1	374.6	349.1	340.5
80°	272.4	263.9	255.4	246.9	238.4
82.5°	161.8	161.8	161.8	161.8	161.8
85°	85.1	93.6	102.2	110.7	119.2
87.5°	51.1	51.1	59.6	68.1	76.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)