

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: P563441

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-80-84-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563441
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-35-UNV-80-84-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .125 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11707.0 lumens
Efficiency: N/A
Efficacy: 117.2 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

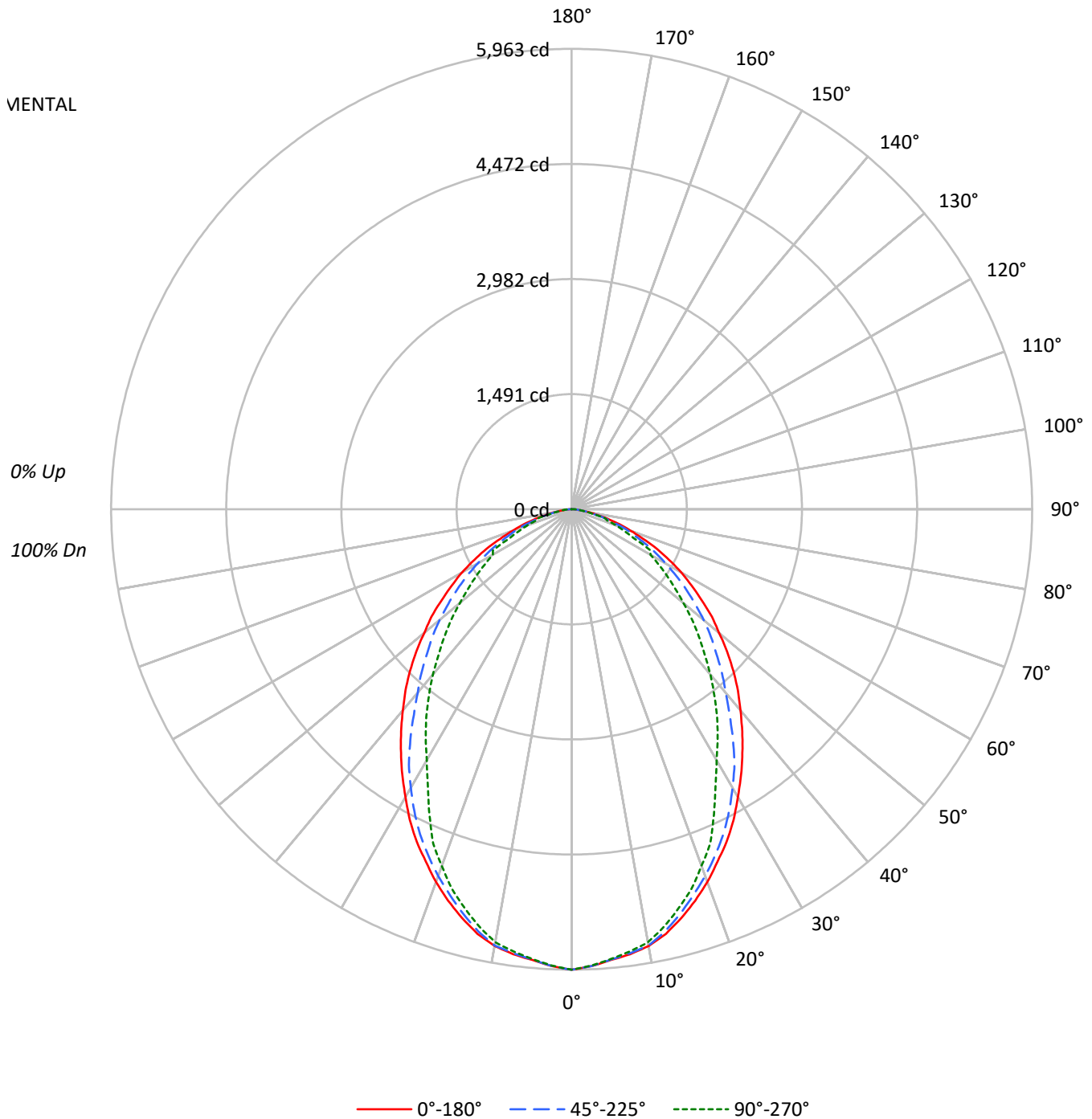
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8024	8024	8024
5°	7915	7905	7896
10°	7846	7837	7780
15°	7634	7558	7452
20°	7354	7236	7038
25°	7052	6898	6468
30°	6684	6469	5827
35°	6330	5979	5390
40°	5970	5449	4904
45°	5628	5037	4434
50°	5210	4676	3954
55°	4819	4237	3542
60°	4415	3785	3172
65°	3885	3314	2809
70°	3200	2902	2387
75°	2545	2222	2329
80°	1709	1602	1495
85°	1064	1277	1490

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5628 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	555.1	4.7
10°-20°	1523.5	13.0
20°-30°	2109.1	18.0
30°-40°	2248.9	19.2
40°-50°	2051.7	17.5
50°-60°	1607.3	13.7
60°-70°	1047.6	8.9
70°-80°	464.1	4.0
80°-90°	99.6	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°	4187.7	35.8
0°-40°	6436.6	55.0
0°-60°	10095.6	86.2
0°-90°	11707.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11707.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5963	5963	5963	5963	5963	
5°	5860	5853	5853	5846	5846	556
15°	5481	5481	5426	5370	5350	1541
25°	4750	4722	4647	4481	4357	2181
35°	3854	3826	3640	3364	3282	2409
45°	2958	2896	2647	2427	2330	2278
55°	2054	1992	1806	1592	1510	1843
65°	1220	1151	1041	1062	882	1203
75°	490	455	427	407	448	525
85°	69	76	83	90	96	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5963.4	5963.4	5963.4	5963.4	5963.4
2.5°	5922.0	5922.0	5922.0	5915.1	5915.1
5°	5860.0	5853.1	5853.1	5846.2	5846.2
7.5°	5811.7	5804.8	5797.9	5791.0	5777.2
10°	5742.8	5742.8	5735.9	5701.4	5694.5
12.5°	5632.5	5625.6	5598.0	5549.7	5536.0
15°	5480.8	5480.8	5425.7	5370.5	5349.8
17.5°	5315.3	5308.5	5239.5	5184.4	5156.8
20°	5136.1	5122.3	5053.4	4963.7	4915.5
22.5°	4936.2	4936.2	4853.4	4736.2	4688.0
25°	4750.0	4722.5	4646.6	4481.2	4357.1
27.5°	4536.3	4494.9	4412.2	4177.8	4033.0
30°	4301.9	4281.2	4164.0	3860.7	3750.4
32.5°	4081.3	4046.8	3922.7	3605.6	3516.0
35°	3853.8	3826.2	3640.1	3364.3	3281.6
37.5°	3626.3	3591.8	3357.4	3136.8	3033.4
40°	3398.8	3357.4	3102.3	2902.4	2792.1
42.5°	3185.1	3129.9	2881.7	2668.0	2543.9
45°	2957.6	2895.5	2647.3	2426.7	2330.2
47.5°	2730.1	2674.9	2447.4	2219.9	2109.6
50°	2488.8	2440.5	2233.7	2006.2	1889.0
52.5°	2288.8	2213.0	2013.1	1785.6	1689.1
55°	2054.4	1992.4	1806.3	1592.5	1509.8
57.5°	1840.7	1778.7	1606.3	1406.4	1337.5
60°	1640.8	1551.2	1406.4	1234.0	1178.9
62.5°	1420.2	1351.2	1227.1	1082.4	1151.3
65°	1220.3	1151.3	1041.0	1061.7	882.4
67.5°	999.6	965.2	868.7	772.1	744.6
70°	813.5	772.1	737.7	634.3	606.7
72.5°	648.0	606.7	558.4	503.3	482.6
75°	489.5	455.0	427.4	406.8	448.1
77.5°	337.8	324.0	303.3	282.7	275.8
80°	220.6	213.7	206.8	199.9	193.0
82.5°	131.0	131.0	131.0	131.0	131.0
85°	68.9	75.8	82.7	89.6	96.5
87.5°	41.4	41.4	48.3	55.2	62.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)