

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: P563511

Luminaire Tested: FSR-24-4-LD4-3STD-40-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563511
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-40-UNV-80-87-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11087.0 lumens
Efficiency: N/A
Efficacy: 111.0 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

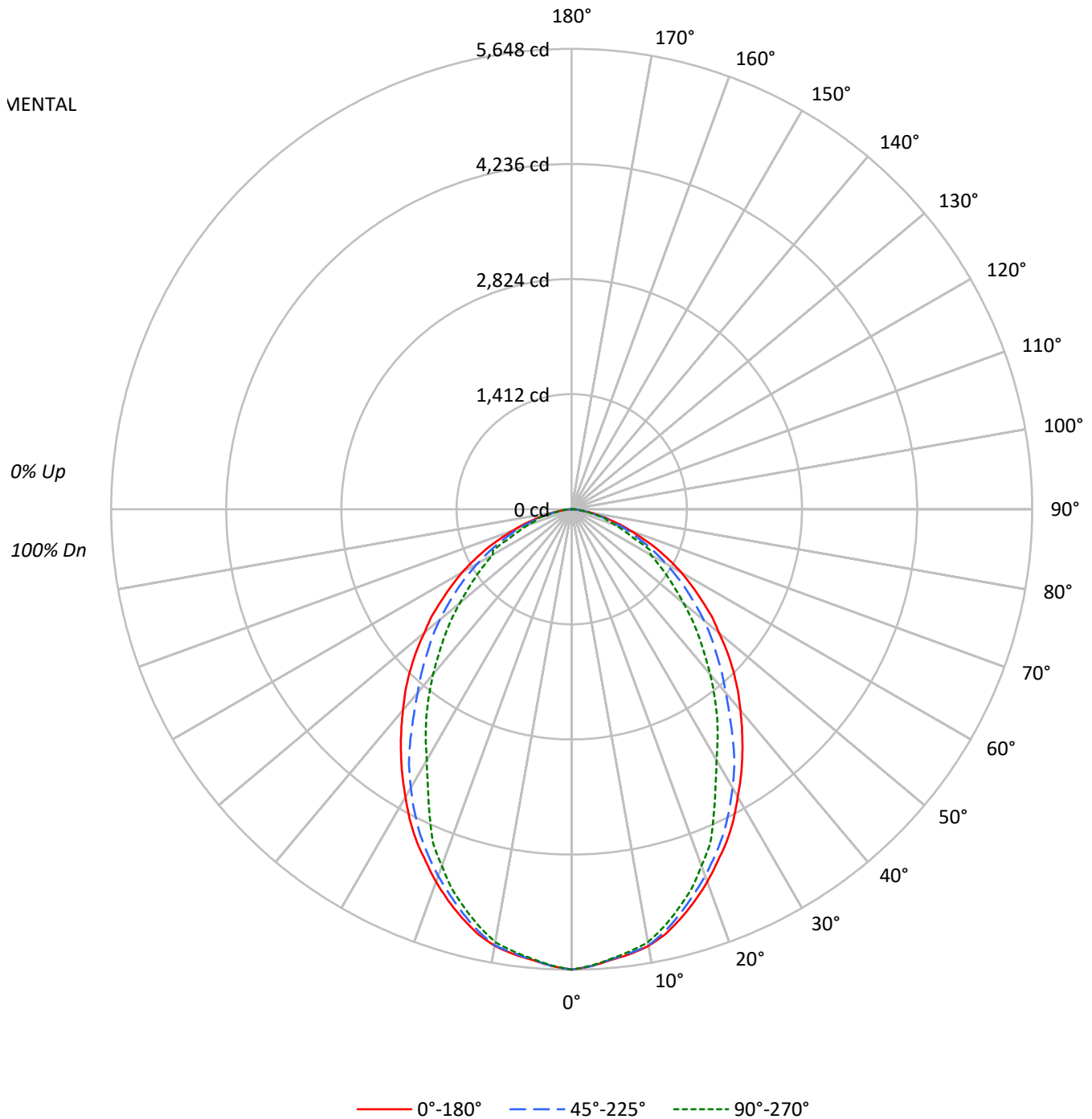
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	7599	7599	7599
5°	7495	7487	7478
10°	7430	7422	7368
15°	7230	7157	7057
20°	6965	6852	6666
25°	6678	6533	6126
30°	6330	6127	5518
35°	5995	5662	5105
40°	5654	5160	4644
45°	5330	4771	4199
50°	4934	4428	3745
55°	4564	4013	3354
60°	4182	3584	3004
65°	3679	3139	2661
70°	3031	2748	2260
75°	2410	2104	2206
80°	1619	1518	1416
85°	1008	1209	1411

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5330 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	525.7	4.7
10°-20°	1442.8	13.0
20°-30°	1997.4	18.0
30°-40°	2129.8	19.2
40°-50°	1943.0	17.5
50°-60°	1522.2	13.7
60°-70°	992.1	8.9
70°-80°	439.5	4.0
80°-90°	94.4	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°	3965.9	35.8
0°-40°	6095.7	55.0
0°-60°	9561.0	86.2
0°-90°	11087.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11087.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5648	5648	5648	5648	5648	
5°	5550	5543	5543	5537	5537	527
15°	5190	5190	5138	5086	5066	1459
25°	4498	4472	4400	4244	4126	2065
35°	3650	3624	3447	3186	3108	2282
45°	2801	2742	2507	2298	2207	2158
55°	1946	1887	1711	1508	1430	1745
65°	1156	1090	986	1006	836	1139
75°	464	431	405	385	424	497
85°	65	72	78	85	91	91
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5647.6	5647.6	5647.6	5647.6	5647.6
2.5°	5608.4	5608.4	5608.4	5601.9	5601.9
5°	5549.6	5543.1	5543.1	5536.6	5536.6
7.5°	5503.9	5497.4	5490.9	5484.3	5471.3
10°	5438.6	5438.6	5432.1	5399.5	5392.9
12.5°	5334.2	5327.6	5301.5	5255.8	5242.8
15°	5190.5	5190.5	5138.3	5086.1	5066.5
17.5°	5033.8	5027.3	4962.0	4909.8	4883.7
20°	4864.1	4851.0	4785.7	4700.9	4655.2
22.5°	4674.8	4674.8	4596.4	4485.4	4439.7
25°	4498.5	4472.4	4400.5	4243.8	4126.3
27.5°	4296.1	4256.9	4178.5	3956.6	3819.5
30°	4074.1	4054.5	3943.5	3656.2	3551.8
32.5°	3865.2	3832.5	3715.0	3414.7	3329.8
35°	3649.7	3623.6	3447.3	3186.1	3107.8
37.5°	3434.2	3401.6	3179.6	2970.7	2872.8
40°	3218.8	3179.6	2938.0	2748.7	2644.2
42.5°	3016.4	2964.2	2729.1	2526.7	2409.2
45°	2800.9	2742.2	2507.1	2298.2	2206.8
47.5°	2585.5	2533.2	2317.8	2102.3	1997.9
50°	2357.0	2311.3	2115.4	1899.9	1788.9
52.5°	2167.6	2095.8	1906.5	1691.0	1599.6
55°	1945.6	1886.9	1710.6	1508.2	1429.8
57.5°	1743.2	1684.5	1521.3	1331.9	1266.6
60°	1553.9	1469.0	1331.9	1168.7	1116.5
62.5°	1345.0	1279.7	1162.2	1025.1	1090.3
65°	1155.6	1090.3	985.9	1005.5	835.7
67.5°	946.7	914.1	822.7	731.2	705.1
70°	770.4	731.2	698.6	600.7	574.6
72.5°	613.7	574.6	528.8	476.6	457.0
75°	463.6	430.9	404.8	385.2	424.4
77.5°	319.9	306.9	287.3	267.7	261.2
80°	208.9	202.4	195.9	189.3	182.8
82.5°	124.1	124.1	124.1	124.1	124.1
85°	65.3	71.8	78.3	84.9	91.4
87.5°	39.2	39.2	45.7	52.2	58.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)