

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: P563766

Luminaire Tested: FSR-24-4-LD4-4HI-50-UNV-80-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563766
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-LD4-4HI-50-UNV-80-87-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16042.0 lumens
Efficiency: N/A
Efficacy: 92.8 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

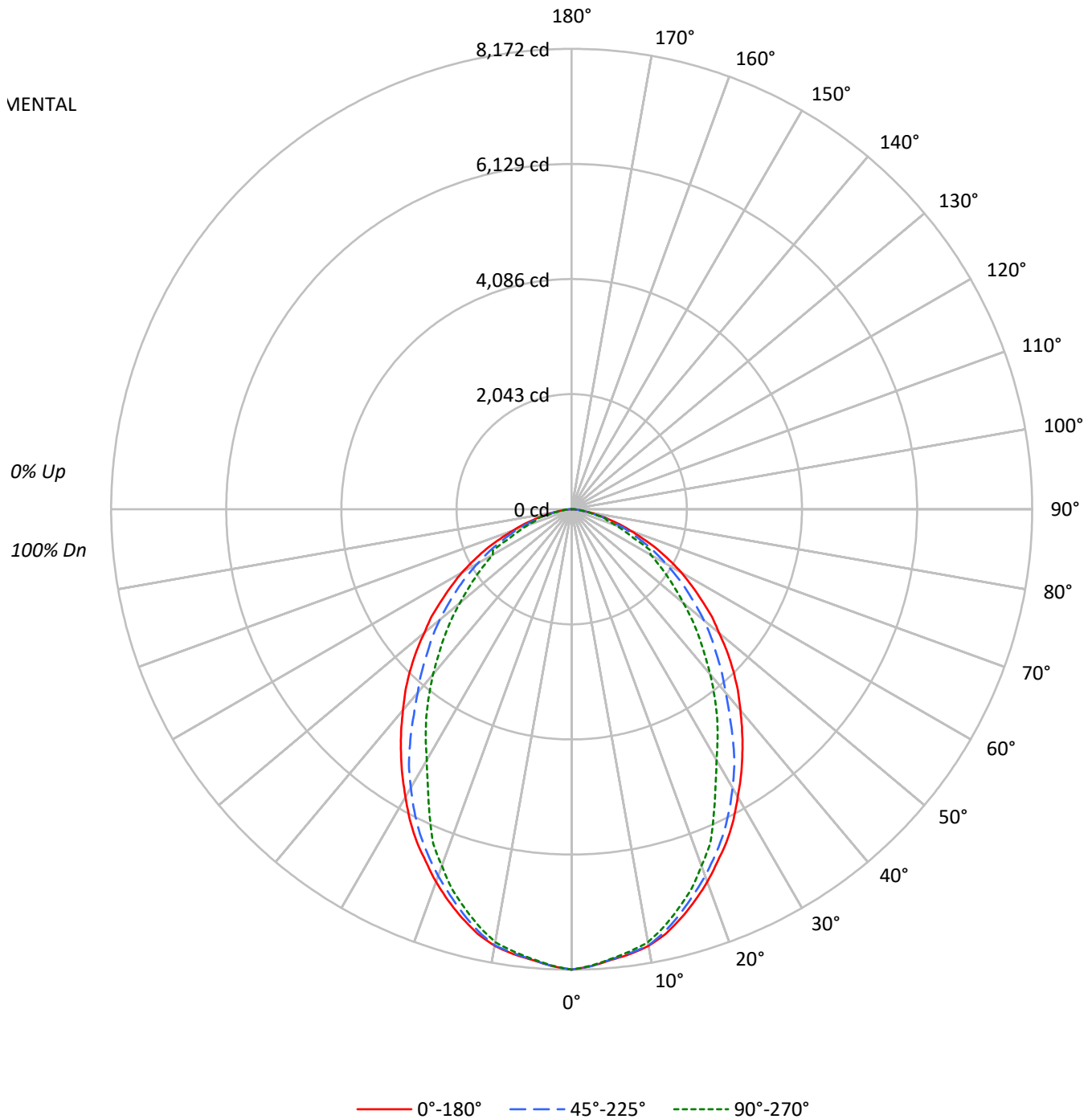
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10995	10995	10995
5°	10845	10833	10820
10°	10751	10738	10661
15°	10461	10356	10211
20°	10077	9915	9644
25°	9663	9453	8864
30°	9159	8865	7984
35°	8674	8193	7386
40°	8180	7467	6720
45°	7712	6903	6076
50°	7138	6407	5418
55°	6604	5806	4853
60°	6050	5186	4347
65°	5323	4542	3850
70°	4385	3976	3270
75°	3487	3045	3192
80°	2342	2196	2049
85°	1459	1751	2042

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7712 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	760.7	4.7
10°-20°	2087.6	13.0
20°-30°	2890.1	18.0
30°-40°	3081.7	19.2
40°-50°	2811.4	17.5
50°-60°	2202.5	13.7
60°-70°	1435.5	8.9
70°-80°	636.0	4.0
80°-90°	136.6	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°	5738.4	35.8
0°-40°	8820.0	55.0
0°-60°	13834.0	86.2
0°-90°	16042.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16042.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8172	8172	8172	8172	8172	
5°	8030	8020	8020	8011	8011	762
15°	7510	7510	7435	7359	7331	2111
25°	6509	6471	6367	6140	5970	2988
35°	5281	5243	4988	4610	4497	3301
45°	4053	3968	3628	3325	3193	3122
55°	2815	2730	2475	2182	2069	2525
65°	1672	1578	1426	1455	1209	1648
75°	671	624	586	557	614	719
85°	94	104	113	123	132	131
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8171.6	8171.6	8171.6	8171.6	8171.6
2.5°	8114.9	8114.9	8114.9	8105.5	8105.5
5°	8029.9	8020.4	8020.4	8011.0	8011.0
7.5°	7963.7	7954.3	7944.9	7935.4	7916.5
10°	7869.3	7869.3	7859.8	7812.6	7803.2
12.5°	7718.1	7708.7	7670.9	7604.8	7585.9
15°	7510.3	7510.3	7434.7	7359.1	7330.8
17.5°	7283.6	7274.1	7179.7	7104.1	7066.3
20°	7038.0	7019.1	6924.6	6801.8	6735.6
22.5°	6764.0	6764.0	6650.6	6490.0	6423.9
25°	6508.9	6471.1	6367.2	6140.5	5970.4
27.5°	6216.1	6159.4	6046.0	5724.8	5526.4
30°	5894.9	5866.5	5705.9	5290.3	5139.1
32.5°	5592.6	5545.3	5375.3	4940.7	4817.9
35°	5280.8	5243.0	4988.0	4610.1	4496.7
37.5°	4969.1	4921.8	4600.6	4298.3	4156.6
40°	4657.3	4600.6	4251.1	3977.2	3826.0
42.5°	4364.5	4288.9	3948.8	3656.0	3485.9
45°	4052.7	3967.7	3627.6	3325.3	3193.1
47.5°	3741.0	3665.4	3353.7	3041.9	2890.8
50°	3410.3	3344.2	3060.8	2749.1	2588.5
52.5°	3136.4	3032.5	2758.5	2446.8	2314.5
55°	2815.2	2730.2	2475.1	2182.2	2068.9
57.5°	2522.3	2437.3	2201.1	1927.2	1832.7
60°	2248.4	2125.6	1927.2	1691.0	1615.4
62.5°	1946.1	1851.6	1681.6	1483.2	1577.6
65°	1672.1	1577.6	1426.5	1454.8	1209.2
67.5°	1369.8	1322.6	1190.3	1058.1	1020.3
70°	1114.7	1058.1	1010.8	869.1	831.3
72.5°	888.0	831.3	765.2	689.6	661.3
75°	670.7	623.5	585.7	557.4	614.0
77.5°	462.9	444.0	415.7	387.3	377.9
80°	302.3	292.9	283.4	274.0	264.5
82.5°	179.5	179.5	179.5	179.5	179.5
85°	94.5	103.9	113.4	122.8	132.3
87.5°	56.7	56.7	66.1	75.6	85.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)