

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: P563894

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-80-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563894
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-LD4-4LO-40-UNV-80-87-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9275.0 lumens
Efficiency: N/A
Efficacy: 99.1 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

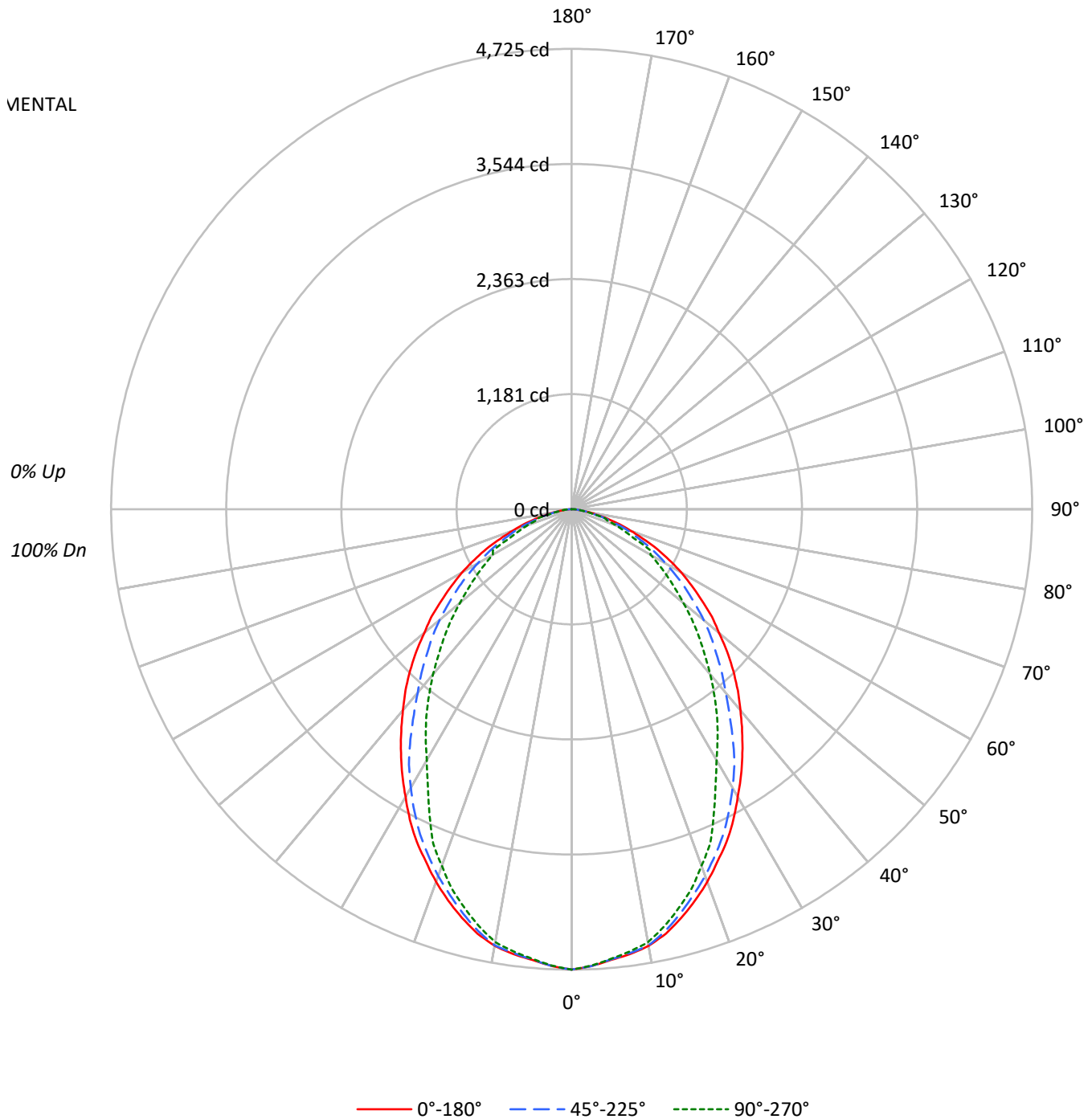
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	6357	6357	6357
5°	6270	6263	6256
10°	6216	6209	6164
15°	6048	5988	5904
20°	5826	5733	5576
25°	5587	5465	5125
30°	5295	5125	4616
35°	5015	4737	4270
40°	4729	4317	3885
45°	4459	3991	3513
50°	4127	3704	3133
55°	3818	3357	2806
60°	3498	2998	2513
65°	3078	2626	2226
70°	2535	2299	1891
75°	2016	1760	1845
80°	1354	1270	1185
85°	843	1011	1181

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4459 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	439.8	4.7
10°-20°	1207.0	13.0
20°-30°	1671.0	18.0
30°-40°	1781.8	19.2
40°-50°	1625.5	17.5
50°-60°	1273.4	13.7
60°-70°	829.9	8.9
70°-80°	367.7	4.0
80°-90°	79.0	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°	3317.7	35.8
0°-40°	5099.5	55.0
0°-60°	7998.4	86.2
0°-90°	9275.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9275.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4725	4725	4725	4725	4725	
5°	4643	4637	4637	4632	4632	441
15°	4342	4342	4298	4255	4238	1221
25°	3763	3741	3681	3550	3452	1728
35°	3053	3031	2884	2665	2600	1909
45°	2343	2294	2097	1923	1846	1805
55°	1628	1578	1431	1262	1196	1460
65°	967	912	825	841	699	953
75°	388	360	339	322	355	416
85°	55	60	66	71	76	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4724.6	4724.6	4724.6	4724.6	4724.6
2.5°	4691.8	4691.8	4691.8	4686.3	4686.3
5°	4642.6	4637.2	4637.2	4631.7	4631.7
7.5°	4604.4	4598.9	4593.5	4588.0	4577.1
10°	4549.8	4549.8	4544.3	4517.0	4511.5
12.5°	4462.4	4456.9	4435.1	4396.8	4385.9
15°	4342.2	4342.2	4298.5	4254.8	4238.5
17.5°	4211.1	4205.7	4151.1	4107.4	4085.5
20°	4069.1	4058.2	4003.6	3932.6	3894.3
22.5°	3910.7	3910.7	3845.2	3752.3	3714.1
25°	3763.3	3741.4	3681.3	3550.2	3451.9
27.5°	3593.9	3561.2	3495.6	3309.9	3195.2
30°	3408.2	3391.9	3299.0	3058.7	2971.3
32.5°	3233.5	3206.1	3107.8	2856.6	2785.6
35°	3053.2	3031.4	2883.9	2665.4	2599.9
37.5°	2873.0	2845.7	2660.0	2485.2	2403.2
40°	2692.7	2660.0	2457.9	2299.5	2212.1
42.5°	2523.4	2479.7	2283.1	2113.8	2015.4
45°	2343.2	2294.0	2097.4	1922.6	1846.1
47.5°	2162.9	2119.2	1939.0	1758.7	1671.3
50°	1971.8	1933.5	1769.7	1589.4	1496.6
52.5°	1813.4	1753.3	1594.9	1414.6	1338.2
55°	1627.7	1578.5	1431.0	1261.7	1196.2
57.5°	1458.3	1409.2	1272.6	1114.2	1059.6
60°	1299.9	1228.9	1114.2	977.7	934.0
62.5°	1125.2	1070.5	972.2	857.5	912.1
65°	966.8	912.1	824.7	841.1	699.1
67.5°	792.0	764.7	688.2	611.7	589.9
70°	644.5	611.7	584.4	502.5	480.6
72.5°	513.4	480.6	442.4	398.7	382.3
75°	387.8	360.5	338.6	322.3	355.0
77.5°	267.6	256.7	240.3	223.9	218.5
80°	174.8	169.3	163.9	158.4	152.9
82.5°	103.8	103.8	103.8	103.8	103.8
85°	54.6	60.1	65.5	71.0	76.5
87.5°	32.8	32.8	38.2	43.7	49.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)