

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: P563832

Luminaire Tested: FSR-24-4-LD4-4LO-35-UNV-80-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563832
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-35-UNV-80-88-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .500 CLEAR PC ENVIRONM
SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8235.0 lumens
Efficiency: N/A
Efficacy: 88.0 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

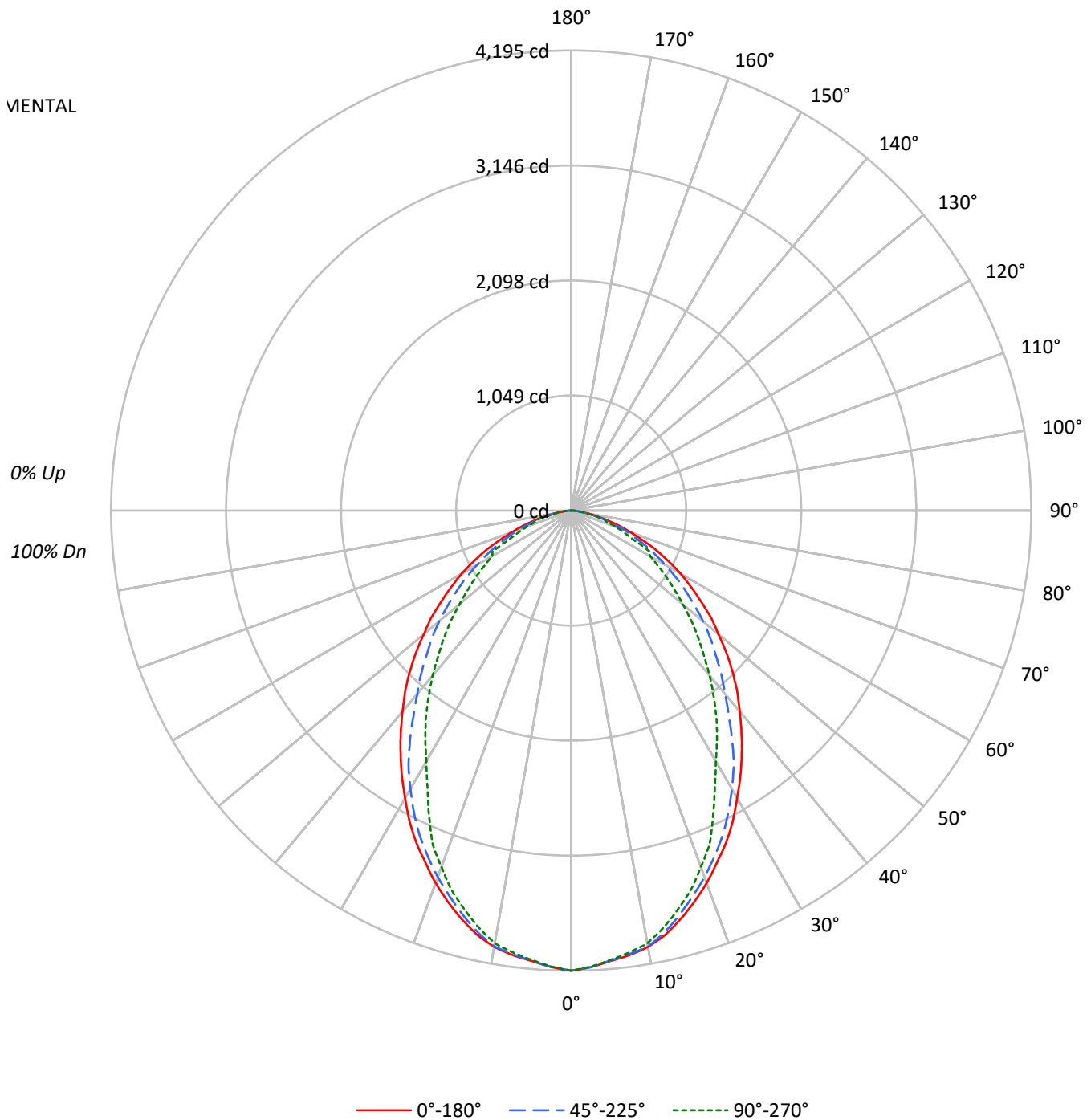
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5644	5644	5644
5°	5567	5561	5554
10°	5519	5513	5473
15°	5370	5316	5242
20°	5173	5090	4951
25°	4960	4852	4550
30°	4701	4551	4099
35°	4453	4206	3792
40°	4199	3833	3450
45°	3959	3543	3119
50°	3665	3289	2781
55°	3390	2981	2491
60°	3106	2662	2232
65°	2733	2331	1976
70°	2251	2041	1679
75°	1790	1563	1639
80°	1203	1127	1052
85°	749	898	1048

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3959 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	390.5	4.7
10°-20°	1071.6	13.0
20°-30°	1483.6	18.0
30°-40°	1582.0	19.2
40°-50°	1443.2	17.5
50°-60°	1130.6	13.7
60°-70°	736.9	8.9
70°-80°	326.5	4.0
80°-90°	70.1	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°	2945.7	35.8
0°-40°	4527.7	55.0
0°-60°	7101.5	86.2
0°-90°	8235.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8235.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4195	4195	4195	4195	4195	
5°	4122	4117	4117	4112	4112	391
15°	3855	3855	3816	3778	3763	1084
25°	3341	3322	3268	3152	3065	1534
35°	2711	2692	2560	2366	2308	1695
45°	2080	2037	1862	1707	1639	1603
55°	1445	1402	1271	1120	1062	1296
65°	858	810	732	747	621	846
75°	344	320	301	286	315	369
85°	48	53	58	63	68	67
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4194.8	4194.8	4194.8	4194.8	4194.8
2.5°	4165.7	4165.7	4165.7	4160.9	4160.9
5°	4122.1	4117.2	4117.2	4112.4	4112.4
7.5°	4088.1	4083.3	4078.4	4073.6	4063.9
10°	4039.6	4039.6	4034.8	4010.5	4005.7
12.5°	3962.0	3957.2	3937.8	3903.8	3894.1
15°	3855.3	3855.3	3816.5	3777.7	3763.2
17.5°	3738.9	3734.1	3685.6	3646.8	3627.4
20°	3612.9	3603.2	3554.7	3491.6	3457.7
22.5°	3472.2	3472.2	3414.0	3331.6	3297.6
25°	3341.3	3321.9	3268.5	3152.2	3064.9
27.5°	3191.0	3161.9	3103.7	2938.8	2836.9
30°	3026.1	3011.5	2929.1	2715.7	2638.1
32.5°	2870.9	2846.6	2759.4	2536.3	2473.2
35°	2710.9	2691.5	2560.5	2366.5	2308.4
37.5°	2550.8	2526.6	2361.7	2206.5	2133.8
40°	2390.8	2361.7	2182.3	2041.6	1964.0
42.5°	2240.5	2201.7	2027.1	1876.7	1789.5
45°	2080.4	2036.8	1862.2	1707.0	1639.1
47.5°	1920.4	1881.6	1721.6	1561.5	1483.9
50°	1750.7	1716.7	1571.2	1411.2	1328.8
52.5°	1610.0	1556.7	1416.0	1256.0	1188.1
55°	1445.1	1401.5	1270.6	1120.2	1062.0
57.5°	1294.8	1251.2	1129.9	989.3	940.8
60°	1154.2	1091.1	989.3	868.1	829.3
62.5°	999.0	950.5	863.2	761.4	809.9
65°	858.4	809.9	732.3	746.8	620.7
67.5°	703.2	678.9	611.0	543.1	523.7
70°	572.2	543.1	518.9	446.2	426.8
72.5°	455.9	426.8	392.8	354.0	339.5
75°	344.3	320.1	300.7	286.1	315.2
77.5°	237.6	227.9	213.4	198.8	194.0
80°	155.2	150.3	145.5	140.6	135.8
82.5°	92.1	92.1	92.1	92.1	92.1
85°	48.5	53.3	58.2	63.0	67.9
87.5°	29.1	29.1	33.9	38.8	43.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)