

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: P562629

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-81-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562629
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-LD4-2HI-50-UNV-81-86-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9052.0 lumens
Efficiency: N/A
Efficacy: 104.8 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

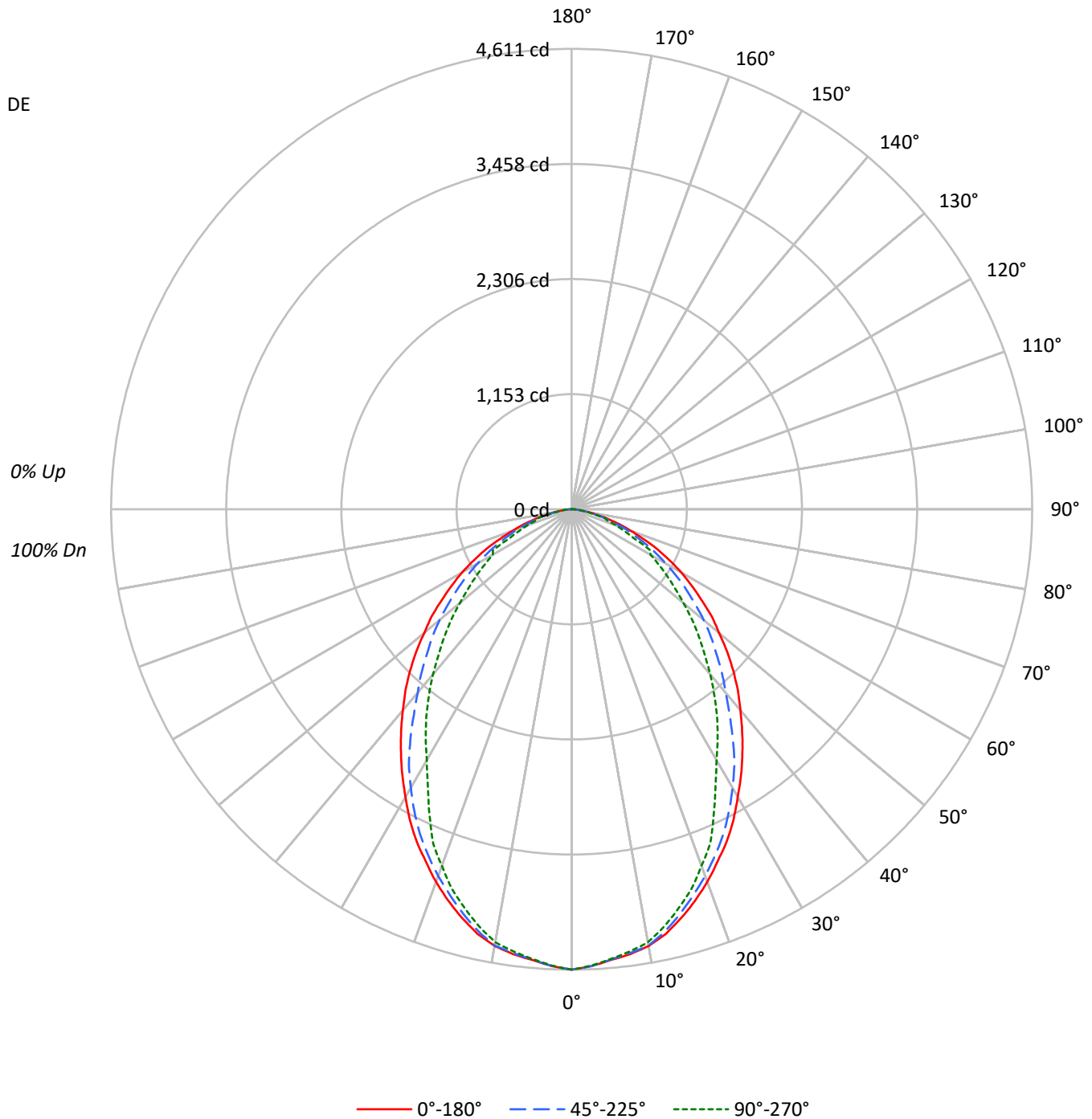
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6204	6204	6204
5°	6120	6113	6105
10°	6067	6059	6016
15°	5903	5844	5762
20°	5686	5595	5442
25°	5453	5334	5001
30°	5168	5002	4505
35°	4894	4623	4168
40°	4616	4213	3792
45°	4351	3895	3428
50°	4028	3615	3057
55°	3726	3276	2738
60°	3414	2926	2453
65°	3004	2563	2172
70°	2474	2244	1845
75°	1968	1718	1801
80°	1322	1239	1157
85°	823	988	1152

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4351 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	429.2	4.7
10°-20°	1178.0	13.0
20°-30°	1630.8	18.0
30°-40°	1738.9	19.2
40°-50°	1586.4	17.5
50°-60°	1242.8	13.7
60°-70°	810.0	8.9
70°-80°	358.9	4.0
80°-90°	77.1	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°	3238.0	35.8
0°-40°	4976.9	55.0
0°-60°	7806.1	86.2
0°-90°	9052.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9052.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4611	4611	4611	4611	4611	
5°	4531	4526	4526	4520	4520	430
15°	4238	4238	4195	4152	4136	1191
25°	3673	3652	3593	3465	3369	1686
35°	2980	2958	2815	2601	2537	1863
45°	2287	2239	2047	1876	1802	1762
55°	1588	1540	1397	1231	1167	1425
65°	944	890	805	821	682	930
75°	378	352	330	314	346	406
85°	53	59	64	69	75	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4611.0	4611.0	4611.0	4611.0	4611.0
2.5°	4579.0	4579.0	4579.0	4573.7	4573.7
5°	4531.0	4525.7	4525.7	4520.3	4520.3
7.5°	4493.7	4488.4	4483.0	4477.7	4467.0
10°	4440.4	4440.4	4435.1	4408.4	4403.1
12.5°	4355.1	4349.8	4328.4	4291.1	4280.5
15°	4237.8	4237.8	4195.2	4152.5	4136.5
17.5°	4109.9	4104.6	4051.3	4008.6	3987.3
20°	3971.3	3960.6	3907.3	3838.0	3800.7
22.5°	3816.7	3816.7	3752.7	3662.1	3624.8
25°	3672.8	3651.5	3592.8	3464.9	3368.9
27.5°	3507.5	3475.6	3411.6	3230.3	3118.4
30°	3326.3	3310.3	3219.7	2985.1	2899.8
32.5°	3155.7	3129.1	3033.1	2787.9	2718.6
35°	2979.8	2958.5	2814.6	2601.3	2537.4
37.5°	2803.9	2777.2	2596.0	2425.4	2345.5
40°	2628.0	2596.0	2398.8	2244.2	2158.9
42.5°	2462.7	2420.1	2228.2	2062.9	1967.0
45°	2286.8	2238.9	2046.9	1876.4	1801.7
47.5°	2110.9	2068.3	1892.4	1716.5	1631.2
50°	1924.3	1887.0	1727.1	1551.2	1460.6
52.5°	1769.8	1711.1	1556.5	1380.6	1306.0
55°	1588.5	1540.5	1396.6	1231.4	1167.4
57.5°	1423.3	1375.3	1242.0	1087.4	1034.1
60°	1268.7	1199.4	1087.4	954.2	911.5
62.5°	1098.1	1044.8	948.8	836.9	890.2
65°	943.5	890.2	804.9	820.9	682.3
67.5°	772.9	746.3	671.7	597.0	575.7
70°	629.0	597.0	570.4	490.4	469.1
72.5°	501.1	469.1	431.8	389.1	373.1
75°	378.5	351.8	330.5	314.5	346.5
77.5°	261.2	250.5	234.5	218.6	213.2
80°	170.6	165.2	159.9	154.6	149.3
82.5°	101.3	101.3	101.3	101.3	101.3
85°	53.3	58.6	64.0	69.3	74.6
87.5°	32.0	32.0	37.3	42.6	48.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)