

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: P562624

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-81-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562624
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-81-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8127.0 lumens
Efficiency: N/A
Efficacy: 94.1 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

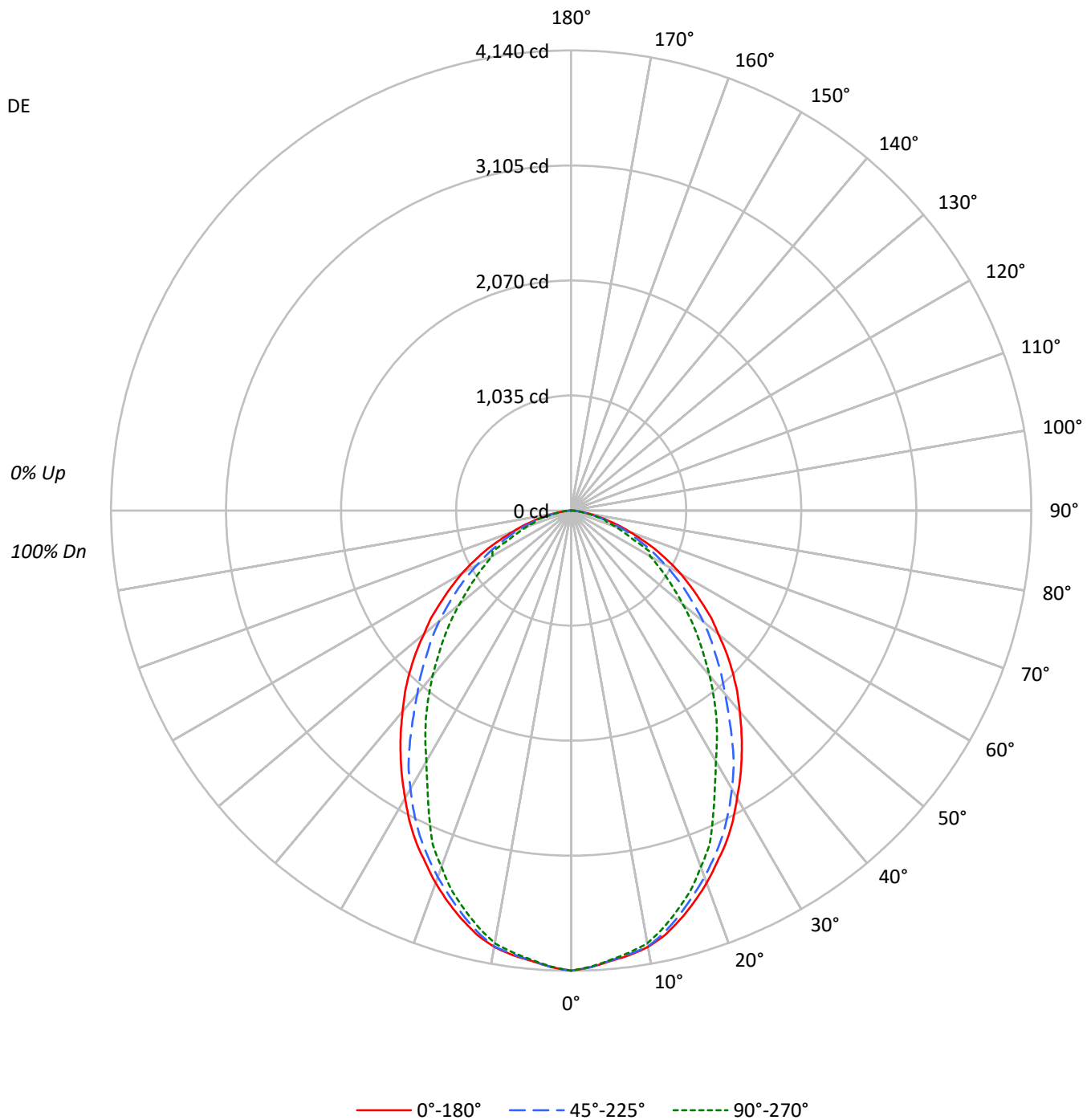
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5570	5570	5570
5°	5494	5488	5481
10°	5447	5440	5401
15°	5300	5247	5173
20°	5105	5023	4886
25°	4895	4789	4490
30°	4640	4491	4045
35°	4394	4151	3742
40°	4144	3783	3404
45°	3907	3497	3078
50°	3616	3246	2745
55°	3346	2941	2459
60°	3065	2627	2202
65°	2697	2301	1950
70°	2222	2015	1657
75°	1766	1542	1617
80°	1186	1113	1038
85°	739	886	1034

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3907 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	385.4	4.7
10°-20°	1057.6	13.0
20°-30°	1464.2	18.0
30°-40°	1561.2	19.2
40°-50°	1424.3	17.5
50°-60°	1115.8	13.7
60°-70°	727.2	8.9
70°-80°	322.2	4.0
80°-90°	69.2	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°	2907.1	35.8
0°-40°	4468.3	55.0
0°-60°	7008.4	86.2
0°-90°	8127.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8127.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4140	4140	4140	4140	4140	
5°	4068	4063	4063	4058	4058	386
15°	3805	3805	3766	3728	3714	1070
25°	3298	3278	3226	3111	3025	1514
35°	2675	2656	2527	2336	2278	1673
45°	2053	2010	1838	1685	1618	1582
55°	1426	1383	1254	1106	1048	1279
65°	847	799	723	737	613	835
75°	340	316	297	282	311	364
85°	48	53	57	62	67	66
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4139.8	4139.8	4139.8	4139.8	4139.8
2.5°	4111.1	4111.1	4111.1	4106.3	4106.3
5°	4068.0	4063.2	4063.2	4058.4	4058.4
7.5°	4034.5	4029.7	4024.9	4020.1	4010.6
10°	3986.6	3986.6	3981.9	3957.9	3953.1
12.5°	3910.1	3905.3	3886.1	3852.6	3843.1
15°	3804.8	3804.8	3766.5	3728.2	3713.8
17.5°	3689.9	3685.1	3637.3	3599.0	3579.8
20°	3565.5	3555.9	3508.0	3445.8	3412.3
22.5°	3426.7	3426.7	3369.3	3287.9	3254.4
25°	3297.5	3278.3	3225.7	3110.8	3024.7
27.5°	3149.1	3120.4	3063.0	2900.2	2799.7
30°	2986.4	2972.0	2890.7	2680.1	2603.5
32.5°	2833.2	2809.3	2723.2	2503.0	2440.8
35°	2675.3	2656.2	2526.9	2335.5	2278.1
37.5°	2517.4	2493.4	2330.7	2177.6	2105.8
40°	2359.4	2330.7	2153.6	2014.9	1938.3
42.5°	2211.1	2172.8	2000.5	1852.1	1766.0
45°	2053.1	2010.1	1837.8	1684.6	1617.6
47.5°	1895.2	1856.9	1699.0	1541.1	1464.5
50°	1727.7	1694.2	1550.6	1392.7	1311.3
52.5°	1588.9	1536.3	1397.5	1239.5	1172.5
55°	1426.2	1383.1	1253.9	1105.5	1048.1
57.5°	1277.8	1234.8	1115.1	976.3	928.5
60°	1139.0	1076.8	976.3	856.7	818.4
62.5°	985.9	938.0	851.9	751.4	799.2
65°	847.1	799.2	722.7	737.0	612.6
67.5°	694.0	670.0	603.0	536.0	516.9
70°	564.7	536.0	512.1	440.3	421.2
72.5°	449.9	421.2	387.7	349.4	335.0
75°	339.8	315.9	296.7	282.4	311.1
77.5°	234.5	224.9	210.6	196.2	191.4
80°	153.1	148.4	143.6	138.8	134.0
82.5°	90.9	90.9	90.9	90.9	90.9
85°	47.9	52.6	57.4	62.2	67.0
87.5°	28.7	28.7	33.5	38.3	43.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)