

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: P562633

Luminaire Tested: FSR-24-4-LD4-2HI-50-UNV-81-88-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562633
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-81-88-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7887.0 lumens
Efficiency: N/A
Efficacy: 91.3 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

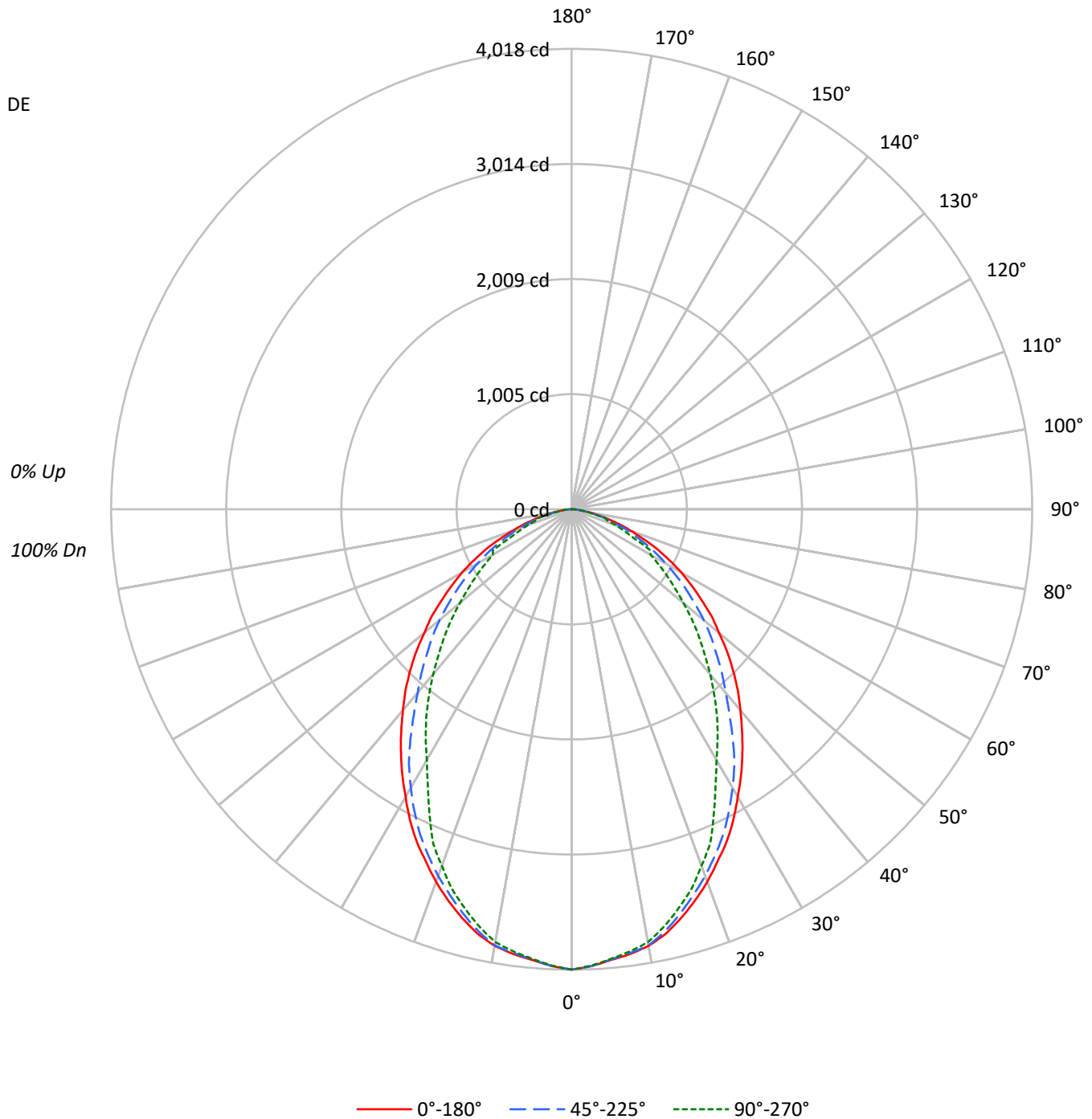
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5406	5406	5406
5°	5332	5326	5320
10°	5286	5280	5241
15°	5143	5092	5020
20°	4954	4875	4742
25°	4751	4647	4358
30°	4503	4358	3925
35°	4265	4028	3631
40°	4022	3671	3304
45°	3791	3394	2987
50°	3510	3150	2664
55°	3247	2855	2386
60°	2975	2550	2137
65°	2617	2233	1893
70°	2156	1955	1608
75°	1714	1497	1569
80°	1151	1079	1007
85°	716	860	1003

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3791 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	374.0	4.7
10°-20°	1026.4	13.0
20°-30°	1420.9	18.0
30°-40°	1515.1	19.2
40°-50°	1382.2	17.5
50°-60°	1082.9	13.7
60°-70°	705.8	8.9
70°-80°	312.7	4.0
80°-90°	67.1	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°	2821.2	35.8
0°-40°	4336.4	55.0
0°-60°	6801.4	86.2
0°-90°	7887.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7887.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4018	4018	4018	4018	4018	
5°	3948	3943	3943	3939	3939	375
15°	3692	3692	3655	3618	3604	1038
25°	3200	3182	3130	3019	2935	1469
35°	2596	2578	2452	2266	2211	1623
45°	1992	1951	1784	1635	1570	1535
55°	1384	1342	1217	1073	1017	1241
65°	822	776	701	715	594	810
75°	330	306	288	274	302	353
85°	46	51	56	60	65	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4017.5	4017.5	4017.5	4017.5	4017.5
2.5°	3989.7	3989.7	3989.7	3985.0	3985.0
5°	3947.9	3943.2	3943.2	3938.6	3938.6
7.5°	3915.4	3910.7	3906.1	3901.4	3892.1
10°	3868.9	3868.9	3864.3	3841.0	3836.4
12.5°	3794.6	3789.9	3771.4	3738.9	3729.6
15°	3692.4	3692.4	3655.3	3618.1	3604.2
17.5°	3580.9	3576.3	3529.9	3492.7	3474.1
20°	3460.2	3450.9	3404.5	3344.1	3311.6
22.5°	3325.5	3325.5	3269.8	3190.8	3158.3
25°	3200.1	3181.5	3130.4	3019.0	2935.4
27.5°	3056.1	3028.2	2972.5	2814.6	2717.1
30°	2898.2	2884.3	2805.3	2600.9	2526.6
32.5°	2749.6	2726.3	2642.7	2429.1	2368.7
35°	2596.3	2577.7	2452.3	2266.5	2210.8
37.5°	2443.0	2419.8	2261.9	2113.3	2043.6
40°	2289.8	2261.9	2090.0	1955.4	1881.0
42.5°	2145.8	2108.6	1941.4	1797.4	1713.8
45°	1992.5	1950.7	1783.5	1634.9	1569.9
47.5°	1839.2	1802.1	1648.8	1495.5	1421.2
50°	1676.7	1644.2	1504.8	1351.6	1272.6
52.5°	1542.0	1490.9	1356.2	1202.9	1137.9
55°	1384.1	1342.3	1216.9	1072.9	1017.2
57.5°	1240.1	1198.3	1082.2	947.5	901.0
60°	1105.4	1045.0	947.5	831.4	794.2
62.5°	956.8	910.3	826.7	729.2	775.6
65°	822.1	775.6	701.3	715.3	594.5
67.5°	673.5	650.2	585.2	520.2	501.6
70°	548.1	520.2	497.0	427.3	408.7
72.5°	436.6	408.7	376.2	339.1	325.1
75°	329.8	306.5	288.0	274.0	301.9
77.5°	227.6	218.3	204.4	190.4	185.8
80°	148.6	144.0	139.3	134.7	130.0
82.5°	88.2	88.2	88.2	88.2	88.2
85°	46.4	51.1	55.7	60.4	65.0
87.5°	27.9	27.9	32.5	37.2	41.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)