

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: P562579

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562579
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-40-UNV-82-85-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8814.0 lumens
Efficiency: N/A
Efficacy: 102.0 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

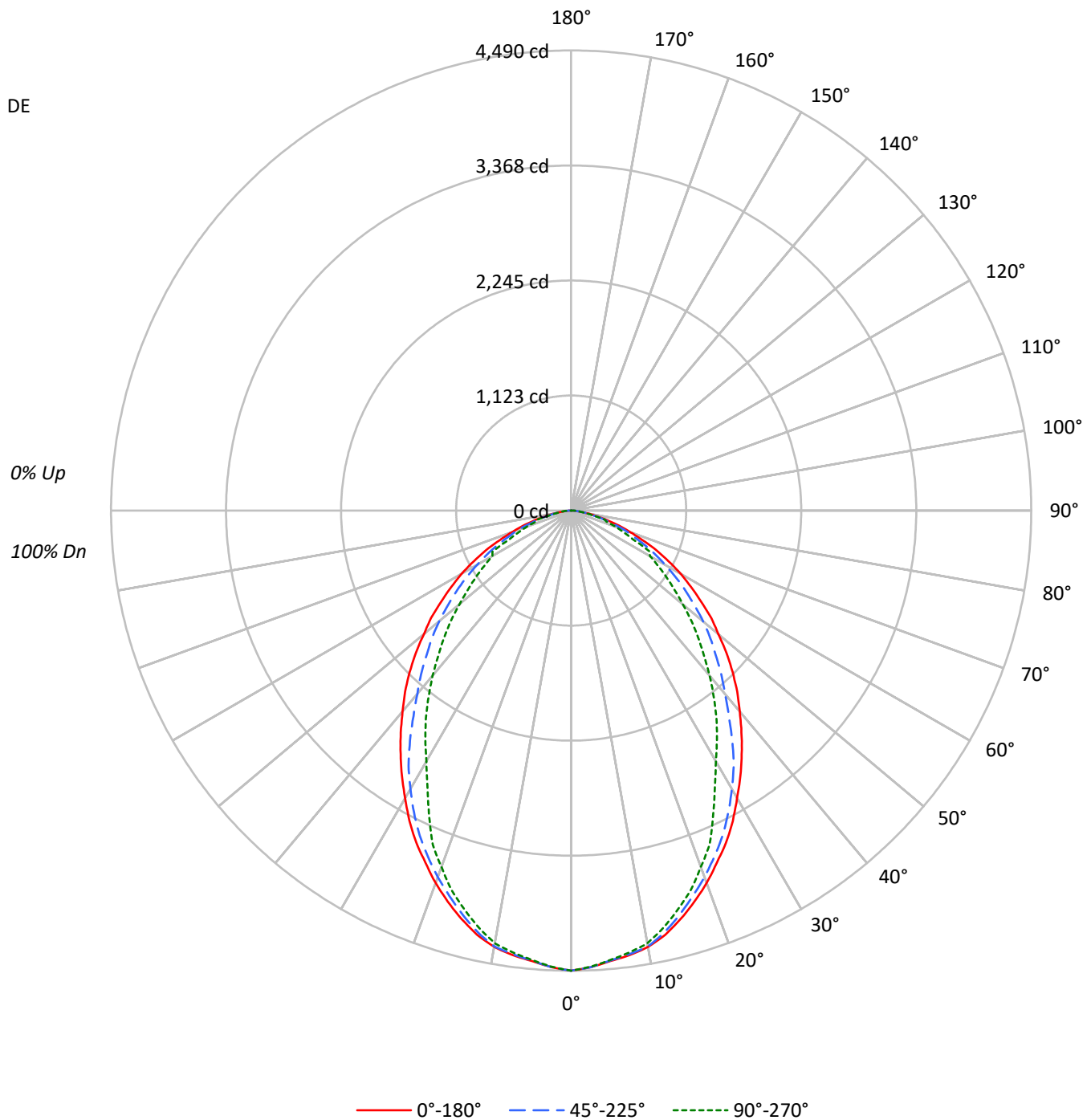
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	50	30	10	0																
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100												100																
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87												87																
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75												75																
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65												65																
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56												56																
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50												50																
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44												44																
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40												40																
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36												36																
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33												33																
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30												30																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6041	6041	6041
5°	5959	5952	5945
10°	5907	5900	5858
15°	5748	5690	5611
20°	5537	5448	5299
25°	5309	5194	4870
30°	5032	4871	4387
35°	4766	4502	4058
40°	4494	4102	3692
45°	4237	3792	3338
50°	3922	3520	2977
55°	3628	3190	2666
60°	3324	2849	2389
65°	2925	2495	2115
70°	2410	2185	1797
75°	1916	1673	1754
80°	1287	1206	1126
85°	801	962	1122

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4237 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	417.9	4.7
10°-20°	1147.0	13.0
20°-30°	1587.9	18.0
30°-40°	1693.2	19.2
40°-50°	1544.7	17.5
50°-60°	1210.1	13.7
60°-70°	788.7	8.9
70°-80°	349.4	4.0
80°-90°	75.0	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°	3152.8	35.8
0°-40°	4846.0	55.0
0°-60°	7600.8	86.2
0°-90°	8814.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8814.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4490	4490	4490	4490	4490	
5°	4412	4407	4407	4402	4402	419
15°	4126	4126	4085	4043	4028	1160
25°	3576	3556	3498	3374	3280	1642
35°	2902	2881	2741	2533	2471	1814
45°	2227	2180	1993	1827	1754	1715
55°	1547	1500	1360	1199	1137	1387
65°	919	867	784	799	664	905
75°	368	343	322	306	337	395
85°	52	57	62	68	73	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4489.7	4489.7	4489.7	4489.7	4489.7
2.5°	4458.6	4458.6	4458.6	4453.4	4453.4
5°	4411.9	4406.7	4406.7	4401.5	4401.5
7.5°	4375.5	4370.4	4365.2	4360.0	4349.6
10°	4323.6	4323.6	4318.4	4292.5	4287.3
12.5°	4240.6	4235.4	4214.6	4178.3	4167.9
15°	4126.4	4126.4	4084.9	4043.4	4027.8
17.5°	4001.8	3996.6	3944.7	3903.2	3882.5
20°	3866.9	3856.5	3804.6	3737.1	3700.8
22.5°	3716.4	3716.4	3654.1	3565.8	3529.5
25°	3576.2	3555.5	3498.4	3373.8	3280.4
27.5°	3415.3	3384.2	3321.9	3145.4	3036.4
30°	3238.8	3223.3	3135.0	2906.6	2823.6
32.5°	3072.7	3046.8	2953.4	2714.6	2647.1
35°	2901.5	2880.7	2740.6	2532.9	2470.7
37.5°	2730.2	2704.2	2527.7	2361.7	2283.8
40°	2558.9	2527.7	2335.7	2185.2	2102.1
42.5°	2398.0	2356.5	2169.6	2008.7	1915.3
45°	2226.7	2180.0	1993.1	1827.0	1754.4
47.5°	2055.4	2013.9	1842.6	1671.3	1588.3
50°	1873.8	1837.4	1681.7	1510.4	1422.2
52.5°	1723.2	1666.1	1515.6	1344.3	1271.7
55°	1546.8	1500.0	1359.9	1199.0	1136.7
57.5°	1385.8	1339.1	1209.4	1058.9	1006.9
60°	1235.3	1167.8	1058.9	929.1	887.6
62.5°	1069.2	1017.3	923.9	814.9	866.8
65°	918.7	866.8	783.8	799.3	664.4
67.5°	752.6	726.7	654.0	581.3	560.6
70°	612.5	581.3	555.4	477.5	456.8
72.5°	487.9	456.8	420.4	378.9	363.3
75°	368.5	342.6	321.8	306.2	337.4
77.5°	254.3	244.0	228.4	212.8	207.6
80°	166.1	160.9	155.7	150.5	145.3
82.5°	98.6	98.6	98.6	98.6	98.6
85°	51.9	57.1	62.3	67.5	72.7
87.5°	31.1	31.1	36.3	41.5	46.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)