

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: P563397

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-81-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563397
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-LD4-3LO-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: 8267.0 lumens
Efficiency: N/A
Efficacy: 117.8 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

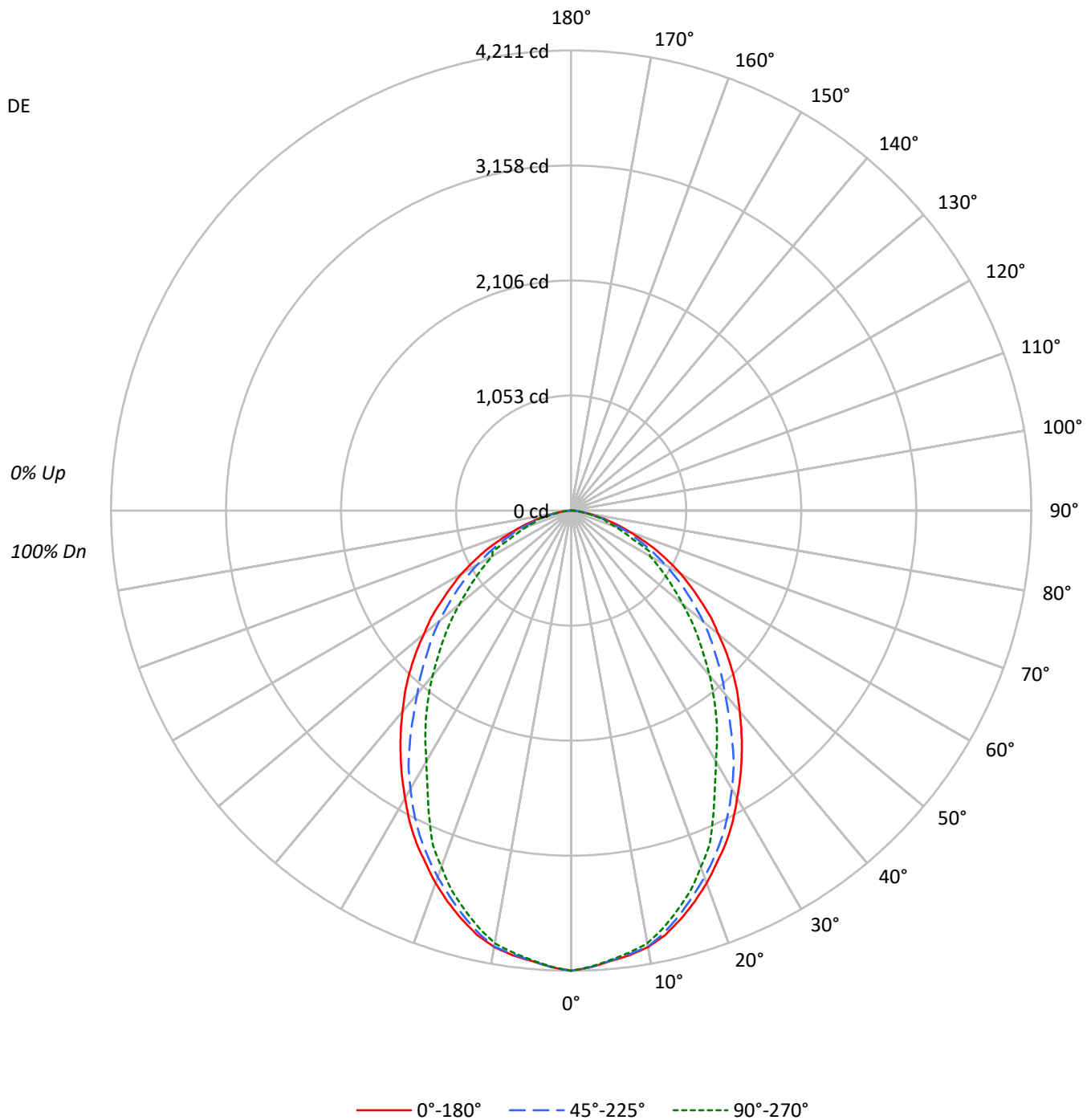
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5666	5666	5666
5°	5589	5582	5576
10°	5541	5534	5494
15°	5391	5337	5262
20°	5193	5110	4970
25°	4980	4871	4568
30°	4720	4568	4115
35°	4470	4222	3806
40°	4216	3848	3463
45°	3974	3557	3131
50°	3679	3302	2792
55°	3403	2992	2501
60°	3118	2672	2240
65°	2743	2340	1984
70°	2260	2049	1685
75°	1797	1569	1645
80°	1207	1131	1056
85°	752	902	1053

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3974 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	392.0	4.7
10°-20°	1075.8	13.0
20°-30°	1489.4	18.0
30°-40°	1588.1	19.2
40°-50°	1448.8	17.5
50°-60°	1135.0	13.7
60°-70°	739.8	8.9
70°-80°	327.7	4.0
80°-90°	70.4	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°	2957.2	35.8
0°-40°	4545.3	55.0
0°-60°	7129.1	86.2
0°-90°	8267.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8267.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4211	4211	4211	4211	4211	
5°	4138	4133	4133	4128	4128	393
15°	3870	3870	3831	3792	3778	1088
25°	3354	3335	3281	3164	3077	1540
35°	2721	2702	2570	2376	2317	1701
45°	2088	2045	1869	1714	1646	1609
55°	1451	1407	1276	1125	1066	1301
65°	862	813	735	750	623	849
75°	346	321	302	287	316	370
85°	49	54	58	63	68	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4211.1	4211.1	4211.1	4211.1	4211.1
2.5°	4181.9	4181.9	4181.9	4177.0	4177.0
5°	4138.1	4133.2	4133.2	4128.3	4128.3
7.5°	4104.0	4099.1	4094.3	4089.4	4079.7
10°	4055.3	4055.3	4050.4	4026.1	4021.2
12.5°	3977.4	3972.6	3953.1	3919.0	3909.3
15°	3870.3	3870.3	3831.4	3792.4	3777.8
17.5°	3753.5	3748.6	3699.9	3661.0	3641.5
20°	3626.9	3617.2	3568.5	3505.2	3471.1
22.5°	3485.7	3485.7	3427.3	3344.5	3310.5
25°	3354.3	3334.8	3281.2	3164.4	3076.8
27.5°	3203.4	3174.1	3115.7	2950.2	2848.0
30°	3037.8	3023.2	2940.5	2726.3	2648.4
32.5°	2882.0	2857.7	2770.1	2546.1	2482.8
35°	2721.4	2701.9	2570.5	2375.7	2317.3
37.5°	2560.7	2536.4	2370.9	2215.1	2142.1
40°	2400.1	2370.9	2190.7	2049.6	1971.7
42.5°	2249.2	2210.2	2035.0	1884.0	1796.4
45°	2088.5	2044.7	1869.4	1713.6	1645.5
47.5°	1927.9	1888.9	1728.3	1567.6	1489.7
50°	1757.5	1723.4	1577.3	1416.7	1333.9
52.5°	1616.3	1562.7	1421.6	1260.9	1192.7
55°	1450.8	1406.9	1275.5	1124.6	1066.2
57.5°	1299.8	1256.0	1134.3	993.1	944.5
60°	1158.7	1095.4	993.1	871.4	832.5
62.5°	1002.9	954.2	866.6	764.3	813.0
65°	861.7	813.0	735.1	749.7	623.1
67.5°	705.9	681.6	613.4	545.3	525.8
70°	574.5	545.3	520.9	447.9	428.4
72.5°	457.6	428.4	394.3	355.4	340.8
75°	345.7	321.3	301.8	287.2	316.4
77.5°	238.5	228.8	214.2	199.6	194.7
80°	155.8	150.9	146.0	141.2	136.3
82.5°	92.5	92.5	92.5	92.5	92.5
85°	48.7	53.6	58.4	63.3	68.2
87.5°	29.2	29.2	34.1	38.9	43.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)