

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: P563594

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-81-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563594
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-LD4-3STD-50-UNV-81-94-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9962.0 lumens
Efficiency: N/A
Efficacy: 99.7 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

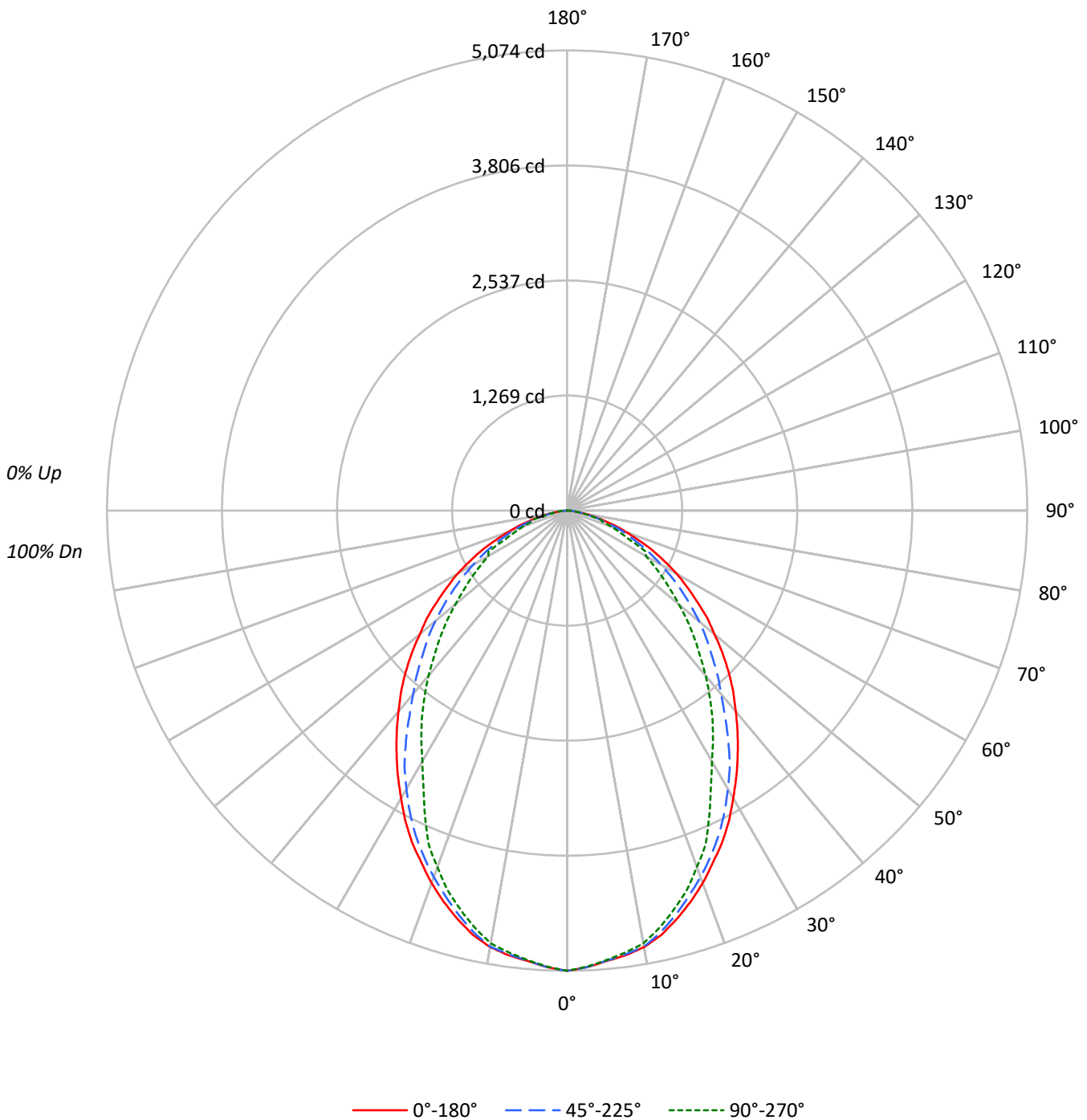
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6828	6828	6828
5°	6735	6727	6719
10°	6677	6669	6620
15°	6497	6431	6341
20°	6258	6157	5989
25°	6001	5870	5504
30°	5687	5505	4958
35°	5387	5088	4587
40°	5080	4637	4173
45°	4789	4286	3773
50°	4433	3979	3365
55°	4101	3605	3014
60°	3757	3221	2700
65°	3306	2820	2391
70°	2723	2469	2031
75°	2165	1891	1982
80°	1454	1364	1273
85°	906	1087	1267

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4789 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	472.4	4.7
10°-20°	1296.4	13.0
20°-30°	1794.7	18.0
30°-40°	1913.7	19.2
40°-50°	1745.9	17.5
50°-60°	1367.8	13.7
60°-70°	891.4	8.9
70°-80°	394.9	4.0
80°-90°	84.8	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°	3563.5	35.8
0°-40°	5477.2	55.0
0°-60°	8590.8	86.2
0°-90°	9962.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9962.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5074	5074	5074	5074	5074	
5°	4986	4981	4981	4975	4975	473
15°	4664	4664	4617	4570	4552	1311
25°	4042	4018	3954	3813	3708	1856
35°	3279	3256	3098	2863	2792	2050
45°	2517	2464	2253	2065	1983	1939
55°	1748	1695	1537	1355	1285	1568
65°	1038	980	886	903	751	1023
75°	416	387	364	346	381	446
85°	59	64	70	76	82	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5074.5	5074.5	5074.5	5074.5	5074.5
2.5°	5039.3	5039.3	5039.3	5033.4	5033.4
5°	4986.5	4980.6	4980.6	4974.8	4974.8
7.5°	4945.4	4939.6	4933.7	4927.8	4916.1
10°	4886.8	4886.8	4880.9	4851.6	4845.7
12.5°	4792.9	4787.1	4763.6	4722.5	4710.8
15°	4663.9	4663.9	4616.9	4570.0	4552.4
17.5°	4523.1	4517.2	4458.5	4411.6	4388.1
20°	4370.5	4358.8	4300.1	4223.9	4182.8
22.5°	4200.4	4200.4	4130.0	4030.3	3989.2
25°	4042.0	4018.5	3954.0	3813.2	3707.6
27.5°	3860.1	3824.9	3754.6	3555.1	3431.9
30°	3660.7	3643.1	3543.4	3285.2	3191.4
32.5°	3473.0	3443.6	3338.0	3068.2	2991.9
35°	3279.4	3255.9	3097.5	2862.8	2792.4
37.5°	3085.8	3056.4	2857.0	2669.3	2581.3
40°	2892.2	2857.0	2639.9	2469.8	2375.9
42.5°	2710.3	2663.4	2452.2	2270.3	2164.7
45°	2516.7	2463.9	2252.7	2065.0	1982.9
47.5°	2323.1	2276.2	2082.6	1889.0	1795.1
50°	2117.8	2076.7	1900.7	1707.1	1607.4
52.5°	1947.7	1883.1	1713.0	1519.4	1437.3
55°	1748.2	1695.4	1537.0	1355.2	1284.8
57.5°	1566.4	1513.6	1366.9	1196.8	1138.1
60°	1396.2	1320.0	1196.8	1050.1	1003.2
62.5°	1208.5	1149.8	1044.2	921.0	979.7
65°	1038.4	979.7	885.8	903.4	750.9
67.5°	850.6	821.3	739.2	657.0	633.6
70°	692.2	657.0	627.7	539.7	516.3
72.5°	551.4	516.3	475.2	428.3	410.7
75°	416.5	387.2	363.7	346.1	381.3
77.5°	287.5	275.7	258.1	240.5	234.7
80°	187.7	181.9	176.0	170.1	164.3
82.5°	111.5	111.5	111.5	111.5	111.5
85°	58.7	64.5	70.4	76.3	82.1
87.5°	35.2	35.2	41.1	46.9	52.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)