

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: P562968

Luminaire Tested: FSR-24-4-LD4-2STD-40-UNV-82-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562968
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-LD4-2STD-40-UNV-82-88-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5201.0 lumens
Efficiency: N/A
Efficacy: 78.1 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

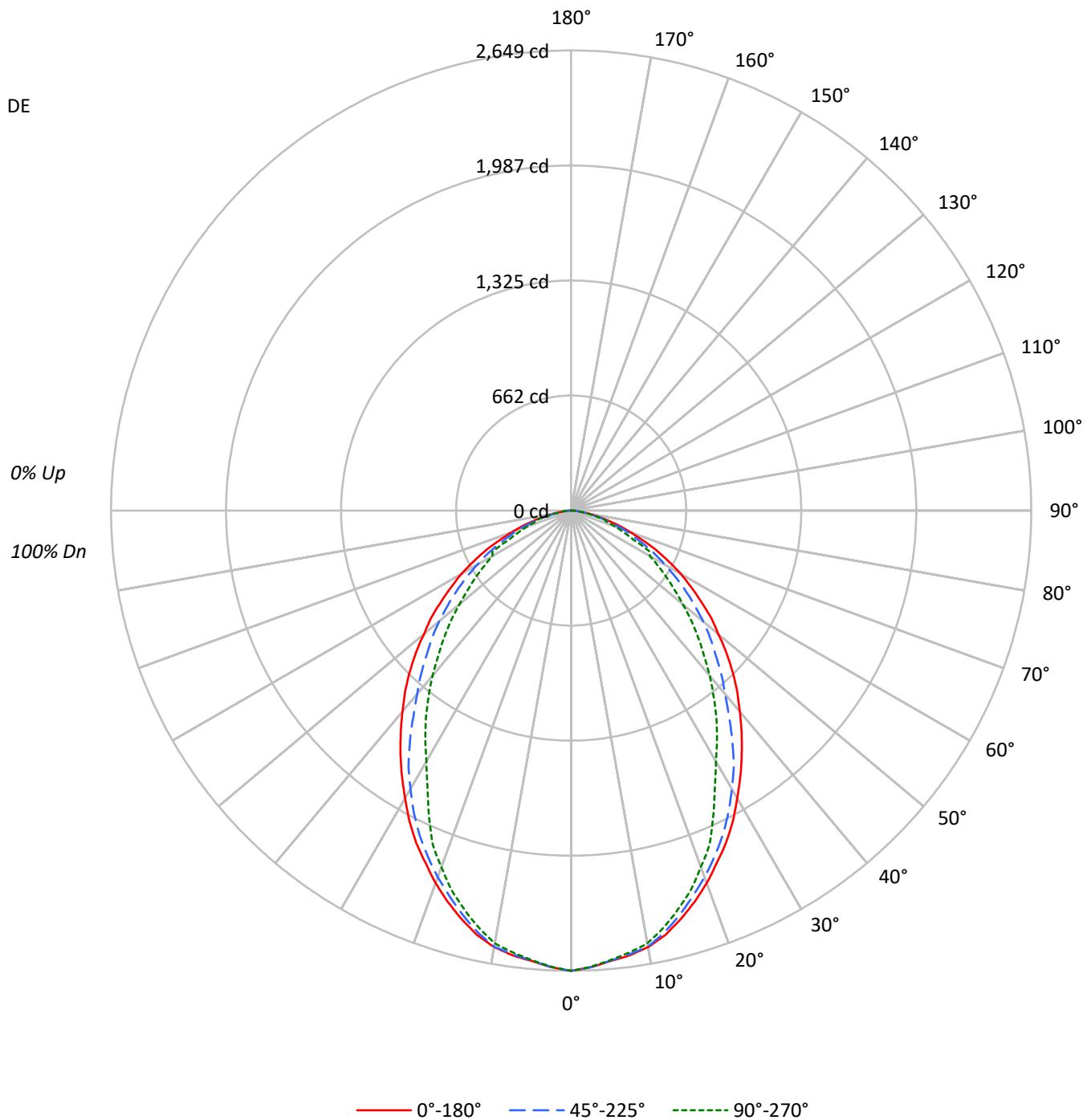
Input Watts (W): 66.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3565	3565	3565
5°	3516	3512	3508
10°	3486	3481	3456
15°	3392	3358	3311
20°	3267	3214	3127
25°	3133	3065	2874
30°	2969	2874	2589
35°	2812	2656	2395
40°	2652	2421	2179
45°	2500	2238	1970
50°	2314	2077	1757
55°	2141	1882	1574
60°	1961	1681	1409
65°	1726	1472	1248
70°	1422	1289	1060
75°	1131	987	1035
80°	759	712	665
85°	472	568	662

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2500 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	246.6	4.7
10°-20°	676.8	13.0
20°-30°	937.0	18.0
30°-40°	999.1	19.2
40°-50°	911.5	17.5
50°-60°	714.1	13.7
60°-70°	465.4	8.9
70°-80°	206.2	4.0
80°-90°	44.3	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°	1860.4	35.8
0°-40°	2859.6	55.0
0°-60°	4485.1	86.2
0°-90°	5201.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5201.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2649	2649	2649	2649	2649	
5°	2603	2600	2600	2597	2597	247
15°	2435	2435	2410	2386	2377	685
25°	2110	2098	2064	1991	1936	969
35°	1712	1700	1617	1495	1458	1070
45°	1314	1286	1176	1078	1035	1012
55°	913	885	802	708	671	819
65°	542	512	462	472	392	534
75°	218	202	190	181	199	233
85°	31	34	37	40	43	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2649.3	2649.3	2649.3	2649.3	2649.3
2.5°	2630.9	2630.9	2630.9	2627.9	2627.9
5°	2603.4	2600.3	2600.3	2597.3	2597.3
7.5°	2581.9	2578.9	2575.8	2572.7	2566.6
10°	2551.3	2551.3	2548.2	2532.9	2529.9
12.5°	2502.3	2499.2	2487.0	2465.6	2459.4
15°	2434.9	2434.9	2410.4	2385.9	2376.7
17.5°	2361.4	2358.4	2327.7	2303.2	2291.0
20°	2281.8	2275.7	2245.0	2205.2	2183.8
22.5°	2193.0	2193.0	2156.2	2104.1	2082.7
25°	2110.3	2098.0	2064.3	1990.8	1935.7
27.5°	2015.3	1996.9	1960.2	1856.1	1791.7
30°	1911.2	1902.0	1849.9	1715.2	1666.2
32.5°	1813.2	1797.9	1742.7	1601.8	1562.0
35°	1712.1	1699.9	1617.2	1494.6	1457.9
37.5°	1611.0	1595.7	1491.6	1393.6	1347.6
40°	1510.0	1491.6	1378.3	1289.4	1240.4
42.5°	1415.0	1390.5	1280.2	1185.3	1130.2
45°	1313.9	1286.4	1176.1	1078.1	1035.2
47.5°	1212.9	1188.4	1087.3	986.2	937.2
50°	1105.7	1084.2	992.3	891.3	839.2
52.5°	1016.8	983.2	894.3	793.3	750.4
55°	912.7	885.1	802.5	707.5	670.8
57.5°	817.8	790.2	713.6	624.8	594.2
60°	728.9	689.1	624.8	548.2	523.7
62.5°	630.9	600.3	545.2	480.9	511.5
65°	542.1	511.5	462.5	471.7	392.0
67.5°	444.1	428.8	385.9	343.0	330.8
70°	361.4	343.0	327.7	281.8	269.5
72.5°	287.9	269.5	248.1	223.6	214.4
75°	217.5	202.1	189.9	180.7	199.1
77.5°	150.1	144.0	134.8	125.6	122.5
80°	98.0	94.9	91.9	88.8	85.8
82.5°	58.2	58.2	58.2	58.2	58.2
85°	30.6	33.7	36.8	39.8	42.9
87.5°	18.4	18.4	21.4	24.5	27.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)