

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: P563802

Luminaire Tested: FSR-24-4-LD4-4HI-50-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563802
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-LD4-4HI-50-UNV-82-94-EDD-90
Description: 2X4 FSR TROFFER WITH .187 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: 15948.0 lumens
Efficiency: N/A
Efficacy: 92.3 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

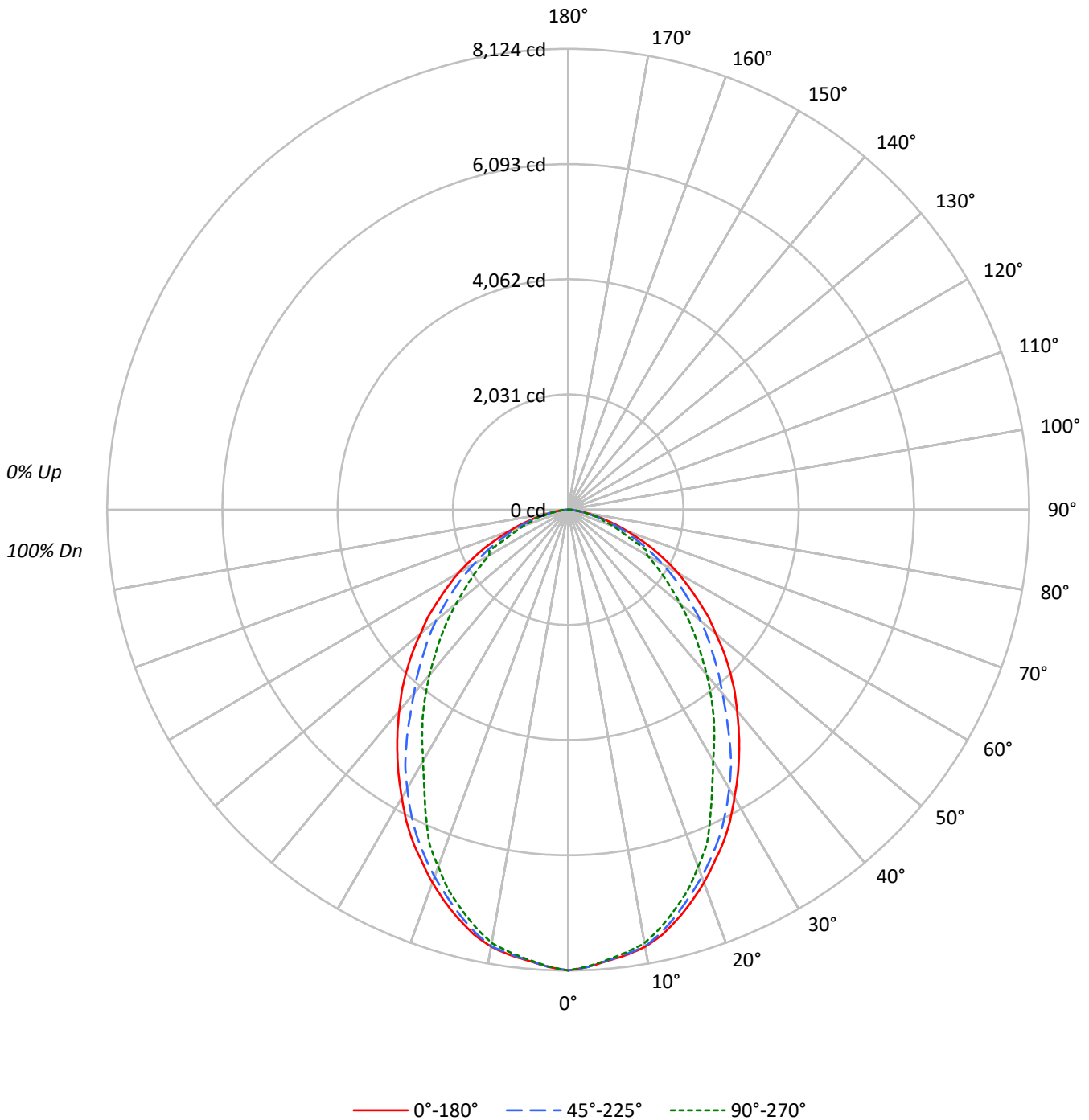
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10930	10930	10930
5°	10782	10769	10756
10°	10688	10676	10599
15°	10400	10296	10152
20°	10018	9857	9588
25°	9606	9397	8812
30°	9105	8813	7938
35°	8623	8145	7343
40°	8132	7423	6681
45°	7666	6862	6040
50°	7097	6369	5386
55°	6565	5772	4825
60°	6015	5156	4322
65°	5292	4515	3827
70°	4360	3953	3251
75°	3466	3027	3174
80°	2328	2183	2038
85°	1450	1740	2030

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7666 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	756.2	4.7
10°-20°	2075.3	13.0
20°-30°	2873.2	18.0
30°-40°	3063.6	19.2
40°-50°	2794.9	17.5
50°-60°	2189.6	13.7
60°-70°	1427.1	8.9
70°-80°	632.3	4.0
80°-90°	135.7	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°	5704.7	35.8
0°-40°	8768.4	55.0
0°-60°	13752.9	86.2
0°-90°	15948.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15948.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	8124	8124	8124	8124	8124	
5°	7983	7973	7973	7964	7964	758
15°	7466	7466	7391	7316	7288	2099
25°	6471	6433	6330	6104	5936	2971
35°	5250	5212	4959	4583	4470	3282
45°	4029	3944	3606	3306	3174	3104
55°	2799	2714	2461	2170	2057	2510
65°	1662	1568	1418	1446	1202	1638
75°	667	620	582	554	610	715
85°	94	103	113	122	132	130
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	8123.7	8123.7	8123.7	8123.7	8123.7
2.5°	8067.3	8067.3	8067.3	8058.0	8058.0
5°	7982.8	7973.4	7973.4	7964.0	7964.0
7.5°	7917.1	7907.7	7898.3	7888.9	7870.1
10°	7823.2	7823.2	7813.8	7766.8	7757.4
12.5°	7672.9	7663.5	7625.9	7560.2	7541.4
15°	7466.3	7466.3	7391.2	7316.0	7287.8
17.5°	7240.9	7231.5	7137.6	7062.5	7024.9
20°	6996.7	6977.9	6884.0	6761.9	6696.2
22.5°	6724.4	6724.4	6611.7	6452.0	6386.3
25°	6470.8	6433.2	6329.9	6104.5	5935.5
27.5°	6179.6	6123.3	6010.6	5691.3	5494.1
30°	5860.3	5832.2	5672.5	5259.3	5109.0
32.5°	5559.8	5512.8	5343.8	4911.8	4789.7
35°	5249.9	5212.3	4958.7	4583.1	4470.4
37.5°	4940.0	4893.0	4573.7	4273.2	4132.3
40°	4630.0	4573.7	4226.2	3953.8	3803.6
42.5°	4338.9	4263.8	3925.7	3634.5	3465.5
45°	4029.0	3944.5	3606.4	3305.8	3174.3
47.5°	3719.1	3643.9	3334.0	3024.1	2873.8
50°	3390.4	3324.6	3042.9	2732.9	2573.3
52.5°	3118.0	3014.7	2742.3	2432.4	2300.9
55°	2798.7	2714.2	2460.6	2169.5	2056.8
57.5°	2507.5	2423.0	2188.2	1915.9	1822.0
60°	2235.2	2113.1	1915.9	1681.1	1606.0
62.5°	1934.7	1840.7	1671.7	1474.5	1568.4
65°	1662.3	1568.4	1418.1	1446.3	1202.1
67.5°	1361.8	1314.8	1183.3	1051.9	1014.3
70°	1108.2	1051.9	1004.9	864.0	826.5
72.5°	882.8	826.5	760.7	685.6	657.4
75°	666.8	619.8	582.3	554.1	610.5
77.5°	460.2	441.4	413.2	385.1	375.7
80°	300.5	291.1	281.7	272.4	263.0
82.5°	178.4	178.4	178.4	178.4	178.4
85°	93.9	103.3	112.7	122.1	131.5
87.5°	56.3	56.3	65.7	75.1	84.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)