

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: P563608

Luminaire Tested: FSR-24-4-LD4-3STD-50-UNV-82-88-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563608
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-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8215.0 lumens
Efficiency: N/A
Efficacy: 82.2 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

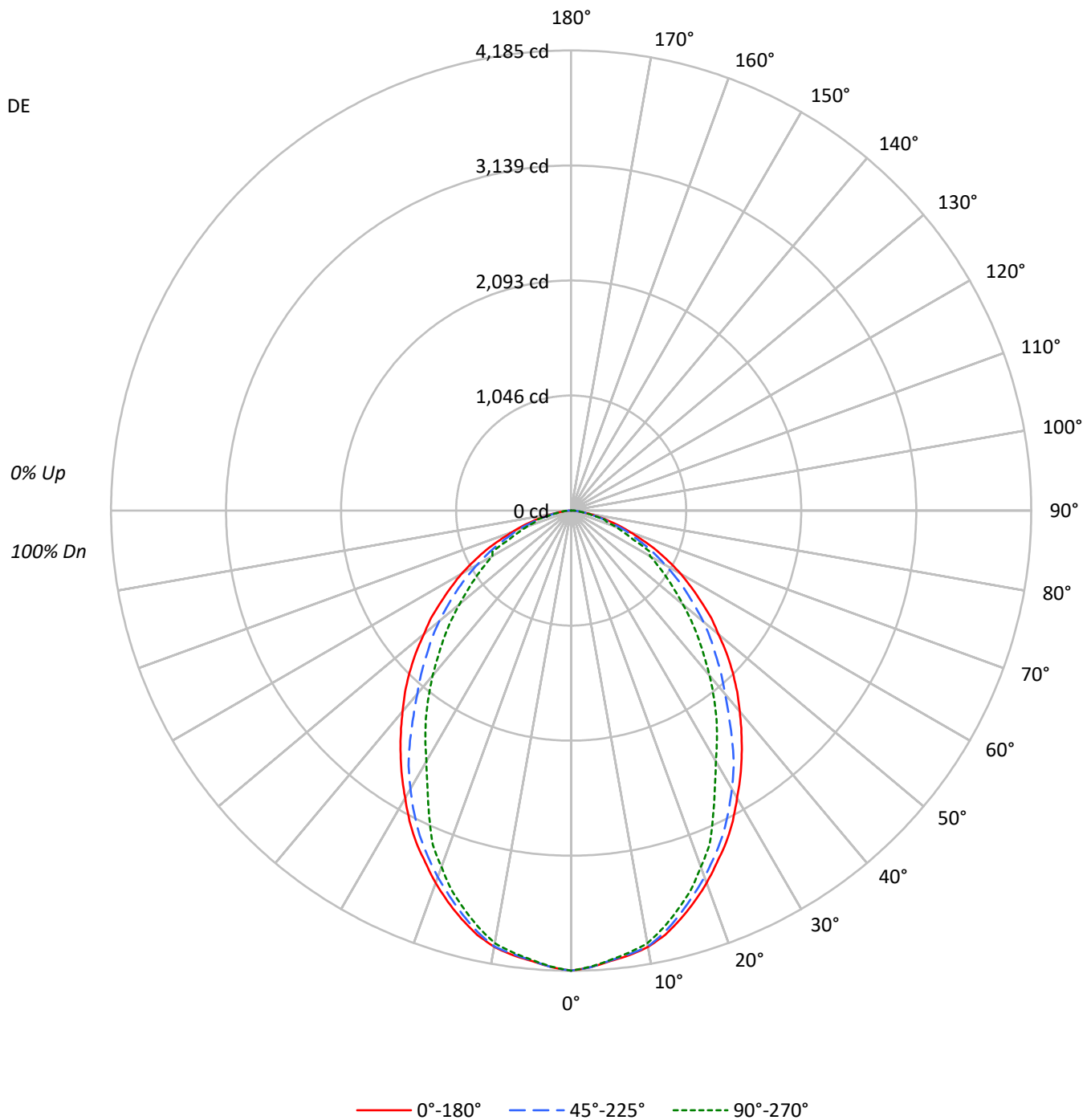
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
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°	5630	5630	5630
5°	5554	5547	5541
10°	5506	5499	5459
15°	5357	5303	5229
20°	5160	5077	4939
25°	4948	4841	4539
30°	4690	4540	4089
35°	4442	4196	3782
40°	4189	3824	3441
45°	3949	3535	3111
50°	3656	3281	2775
55°	3382	2973	2485
60°	3098	2656	2226
65°	2726	2326	1971
70°	2245	2036	1675
75°	1786	1559	1635
80°	1199	1124	1050
85°	747	897	1045

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3949 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	389.5	4.7
10°-20°	1069.0	13.0
20°-30°	1480.0	18.0
30°-40°	1578.1	19.2
40°-50°	1439.7	17.5
50°-60°	1127.9	13.7
60°-70°	735.1	8.9
70°-80°	325.7	4.0
80°-90°	69.9	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°	2938.6	35.8
0°-40°	4516.7	55.0
0°-60°	7084.3	86.2
0°-90°	8215.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8215.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4185	4185	4185	4185	4185	
5°	4112	4107	4107	4102	4102	390
15°	3846	3846	3807	3769	3754	1081
25°	3333	3314	3261	3144	3057	1530
35°	2704	2685	2554	2361	2303	1691
45°	2075	2032	1858	1703	1635	1599
55°	1442	1398	1268	1118	1060	1293
65°	856	808	730	745	619	844
75°	344	319	300	285	314	368
85°	48	53	58	63	68	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4184.6	4184.6	4184.6	4184.6	4184.6
2.5°	4155.6	4155.6	4155.6	4150.7	4150.7
5°	4112.0	4107.2	4107.2	4102.4	4102.4
7.5°	4078.2	4073.3	4068.5	4063.7	4054.0
10°	4029.8	4029.8	4025.0	4000.8	3995.9
12.5°	3952.4	3947.6	3928.2	3894.3	3884.7
15°	3846.0	3846.0	3807.3	3768.6	3754.1
17.5°	3729.9	3725.0	3676.7	3638.0	3618.6
20°	3604.1	3594.4	3546.0	3483.1	3449.3
22.5°	3463.8	3463.8	3405.7	3323.5	3289.6
25°	3333.2	3313.8	3260.6	3144.5	3057.4
27.5°	3183.2	3154.2	3096.1	2931.6	2830.1
30°	3018.7	3004.2	2922.0	2709.1	2631.7
32.5°	2863.9	2839.7	2752.7	2530.1	2467.2
35°	2704.3	2684.9	2554.3	2360.8	2302.7
37.5°	2544.6	2520.4	2356.0	2201.2	2128.6
40°	2385.0	2356.0	2177.0	2036.7	1959.3
42.5°	2235.0	2196.3	2022.2	1872.2	1785.1
45°	2075.4	2031.8	1857.7	1702.9	1635.1
47.5°	1915.7	1877.0	1717.4	1557.7	1480.3
50°	1746.4	1712.5	1567.4	1407.8	1325.5
52.5°	1606.1	1552.9	1412.6	1253.0	1185.2
55°	1441.6	1398.1	1267.5	1117.5	1059.5
57.5°	1291.7	1248.1	1127.2	986.9	938.5
60°	1151.4	1088.5	986.9	865.9	827.2
62.5°	996.6	948.2	861.1	759.5	807.9
65°	856.3	807.9	730.5	745.0	619.2
67.5°	701.5	677.3	609.6	541.8	522.5
70°	570.8	541.8	517.6	445.1	425.7
72.5°	454.7	425.7	391.9	353.2	338.6
75°	343.5	319.3	299.9	285.4	314.5
77.5°	237.0	227.4	212.9	198.3	193.5
80°	154.8	150.0	145.1	140.3	135.5
82.5°	91.9	91.9	91.9	91.9	91.9
85°	48.4	53.2	58.1	62.9	67.7
87.5°	29.0	29.0	33.9	38.7	43.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)