

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: P563475

Luminaire Tested: FSR-24-4-LD4-3STD-35-UNV-82-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563475
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-35-UNV-82-85-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10672.0 lumens
Efficiency: N/A
Efficacy: 106.8 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

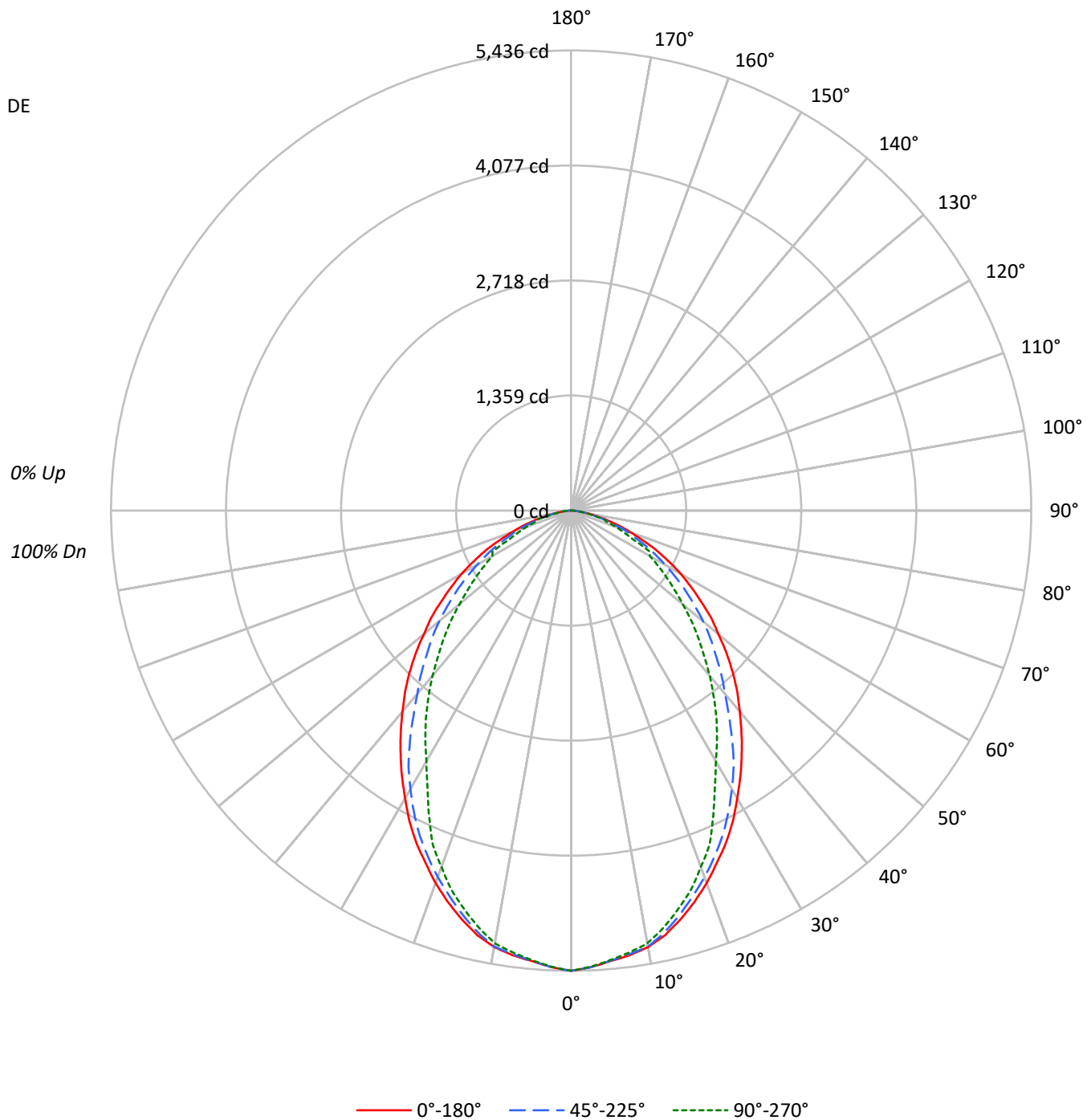
Input Watts (W): 99.9
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7314	7314	7314
5°	7215	7206	7198
10°	7152	7144	7092
15°	6960	6890	6793
20°	6704	6596	6416
25°	6428	6288	5897
30°	6093	5897	5312
35°	5770	5450	4914
40°	5442	4967	4471
45°	5130	4592	4042
50°	4749	4262	3605
55°	4393	3863	3229
60°	4025	3450	2892
65°	3542	3021	2561
70°	2917	2646	2175
75°	2320	2025	2124
80°	1558	1461	1364
85°	969	1164	1359

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5130 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	506.0	4.7
10°-20°	1388.8	13.0
20°-30°	1922.7	18.0
30°-40°	2050.1	19.2
40°-50°	1870.3	17.5
50°-60°	1465.2	13.7
60°-70°	955.0	8.9
70°-80°	423.1	4.0
80°-90°	90.8	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°	3817.5	35.8
0°-40°	5867.6	55.0
0°-60°	9203.1	86.2
0°-90°	10672.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10672.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5436	5436	5436	5436	5436	
5°	5342	5336	5336	5329	5329	507
15°	4996	4996	4946	4896	4877	1405
25°	4330	4305	4236	4085	3972	1988
35°	3513	3488	3318	3067	2992	2196
45°	2696	2640	2413	2212	2124	2077
55°	1873	1816	1647	1452	1376	1680
65°	1112	1050	949	968	804	1096
75°	446	415	390	371	408	478
85°	63	69	75	82	88	87
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5436.2	5436.2	5436.2	5436.2	5436.2
2.5°	5398.5	5398.5	5398.5	5392.2	5392.2
5°	5341.9	5335.6	5335.6	5329.3	5329.3
7.5°	5297.9	5291.6	5285.3	5279.1	5266.5
10°	5235.1	5235.1	5228.8	5197.4	5191.1
12.5°	5134.5	5128.2	5103.1	5059.1	5046.5
15°	4996.3	4996.3	4946.0	4895.7	4876.8
17.5°	4845.4	4839.1	4776.3	4726.0	4700.9
20°	4682.0	4669.5	4606.6	4524.9	4480.9
22.5°	4499.8	4499.8	4424.4	4317.5	4273.5
25°	4330.1	4304.9	4235.8	4085.0	3971.9
27.5°	4135.3	4097.6	4022.1	3808.5	3676.5
30°	3921.6	3902.7	3795.9	3519.4	3418.8
32.5°	3720.5	3689.1	3575.9	3286.8	3205.1
35°	3513.1	3487.9	3318.3	3066.9	2991.5
37.5°	3305.7	3274.3	3060.6	2859.5	2765.2
40°	3098.3	3060.6	2828.1	2645.8	2545.3
42.5°	2903.5	2853.2	2627.0	2432.1	2319.0
45°	2696.1	2639.5	2413.3	2212.2	2124.2
47.5°	2488.7	2438.4	2231.0	2023.6	1923.1
50°	2268.7	2224.7	2036.2	1828.8	1722.0
52.5°	2086.5	2017.4	1835.1	1627.7	1539.7
55°	1872.8	1816.2	1646.6	1451.7	1376.3
57.5°	1678.0	1621.4	1464.3	1282.1	1219.2
60°	1495.7	1414.0	1282.1	1124.9	1074.7
62.5°	1294.6	1231.8	1118.7	986.7	1049.5
65°	1112.4	1049.5	949.0	967.8	804.4
67.5°	911.3	879.8	791.9	703.9	678.7
70°	741.6	703.9	672.5	578.2	553.0
72.5°	590.8	553.0	509.1	458.8	439.9
75°	446.2	414.8	389.6	370.8	408.5
77.5°	307.9	295.4	276.5	257.7	251.4
80°	201.1	194.8	188.5	182.3	176.0
82.5°	119.4	119.4	119.4	119.4	119.4
85°	62.8	69.1	75.4	81.7	88.0
87.5°	37.7	37.7	44.0	50.3	56.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)