

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: P563234

Luminaire Tested: FSR-24-4-LD4-3HI-50-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563234
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-LD4-3HI-50-UNV-93-85-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12602.0 lumens
Efficiency: N/A
Efficacy: 97.2 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

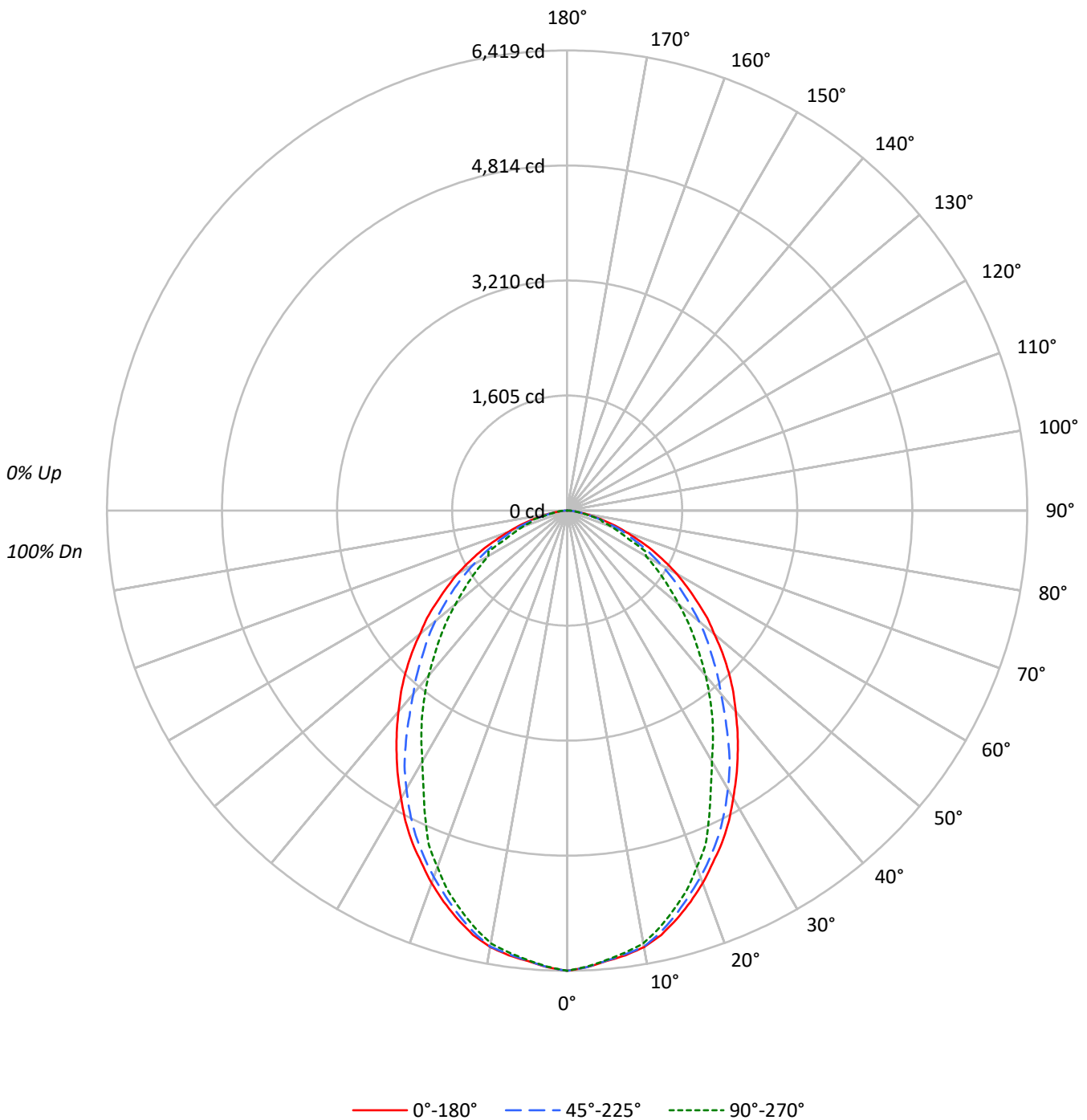
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8637	8637	8637
5°	8520	8510	8500
10°	8446	8436	8375
15°	8218	8135	8022
20°	7916	7789	7576
25°	7591	7426	6963
30°	7195	6964	6272
35°	6814	6436	5802
40°	6426	5866	5279
45°	6058	5422	4773
50°	5608	5033	4256
55°	5188	4561	3812
60°	4753	4074	3415
65°	4182	3568	3024
70°	3445	3124	2569
75°	2739	2392	2508
80°	1840	1725	1610
85°	1145	1376	1604

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6058 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	597.6	4.7
10°-20°	1639.9	13.0
20°-30°	2270.4	18.0
30°-40°	2420.9	19.2
40°-50°	2208.5	17.5
50°-60°	1730.2	13.7
60°-70°	1127.7	8.9
70°-80°	499.6	4.0
80°-90°	107.3	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°	4507.8	35.8
0°-40°	6928.7	55.0
0°-60°	10867.5	86.2
0°-90°	12602.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12602.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6419	6419	6419	6419	6419	
5°	6308	6301	6301	6293	6293	599
15°	5900	5900	5840	5781	5759	1659
25°	5113	5084	5002	4824	4690	2347
35°	4148	4119	3918	3622	3532	2594
45°	3184	3117	2850	2612	2508	2452
55°	2212	2145	1944	1714	1625	1984
65°	1314	1239	1121	1143	950	1295
75°	527	490	460	438	482	565
85°	74	82	89	96	104	103
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6419.3	6419.3	6419.3	6419.3	6419.3
2.5°	6374.8	6374.8	6374.8	6367.3	6367.3
5°	6308.0	6300.6	6300.6	6293.1	6293.1
7.5°	6256.0	6248.6	6241.2	6233.8	6218.9
10°	6181.8	6181.8	6174.4	6137.3	6129.9
12.5°	6063.1	6055.7	6026.0	5974.0	5959.2
15°	5899.8	5899.8	5840.4	5781.1	5758.8
17.5°	5721.7	5714.3	5640.1	5580.7	5551.0
20°	5528.8	5513.9	5439.7	5343.2	5291.3
22.5°	5313.5	5313.5	5224.5	5098.3	5046.4
25°	5113.2	5083.5	5001.9	4823.7	4690.2
27.5°	4883.1	4838.6	4749.5	4497.2	4341.4
30°	4630.8	4608.5	4482.4	4155.8	4037.1
32.5°	4393.3	4356.2	4222.6	3881.3	3784.8
35°	4148.4	4118.7	3918.4	3621.5	3532.5
37.5°	3903.5	3866.4	3614.1	3376.6	3265.3
40°	3658.6	3614.1	3339.5	3124.3	3005.6
42.5°	3428.6	3369.2	3102.0	2872.0	2738.4
45°	3183.7	3116.9	2849.7	2612.2	2508.3
47.5°	2938.8	2879.4	2634.5	2389.6	2270.9
50°	2679.0	2627.1	2404.5	2159.6	2033.4
52.5°	2463.8	2382.2	2167.0	1922.1	1818.2
55°	2211.5	2144.7	1944.3	1714.3	1625.2
57.5°	1981.4	1914.7	1729.1	1513.9	1439.7
60°	1766.2	1669.8	1513.9	1328.4	1269.0
62.5°	1528.8	1454.5	1321.0	1165.1	1239.3
65°	1313.5	1239.3	1120.6	1142.9	949.9
67.5°	1076.1	1039.0	935.1	831.2	801.5
70°	875.7	831.2	794.1	682.7	653.1
72.5°	697.6	653.1	601.1	541.7	519.5
75°	526.9	489.8	460.1	437.8	482.4
77.5°	363.6	348.8	326.5	304.3	296.8
80°	237.5	230.1	222.6	215.2	207.8
82.5°	141.0	141.0	141.0	141.0	141.0
85°	74.2	81.6	89.1	96.5	103.9
87.5°	44.5	44.5	51.9	59.4	66.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)