

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: P562571

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562571
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-LD4-2HI-40-UNV-81-94-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9207.0 lumens
Efficiency: N/A
Efficacy: 106.6 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

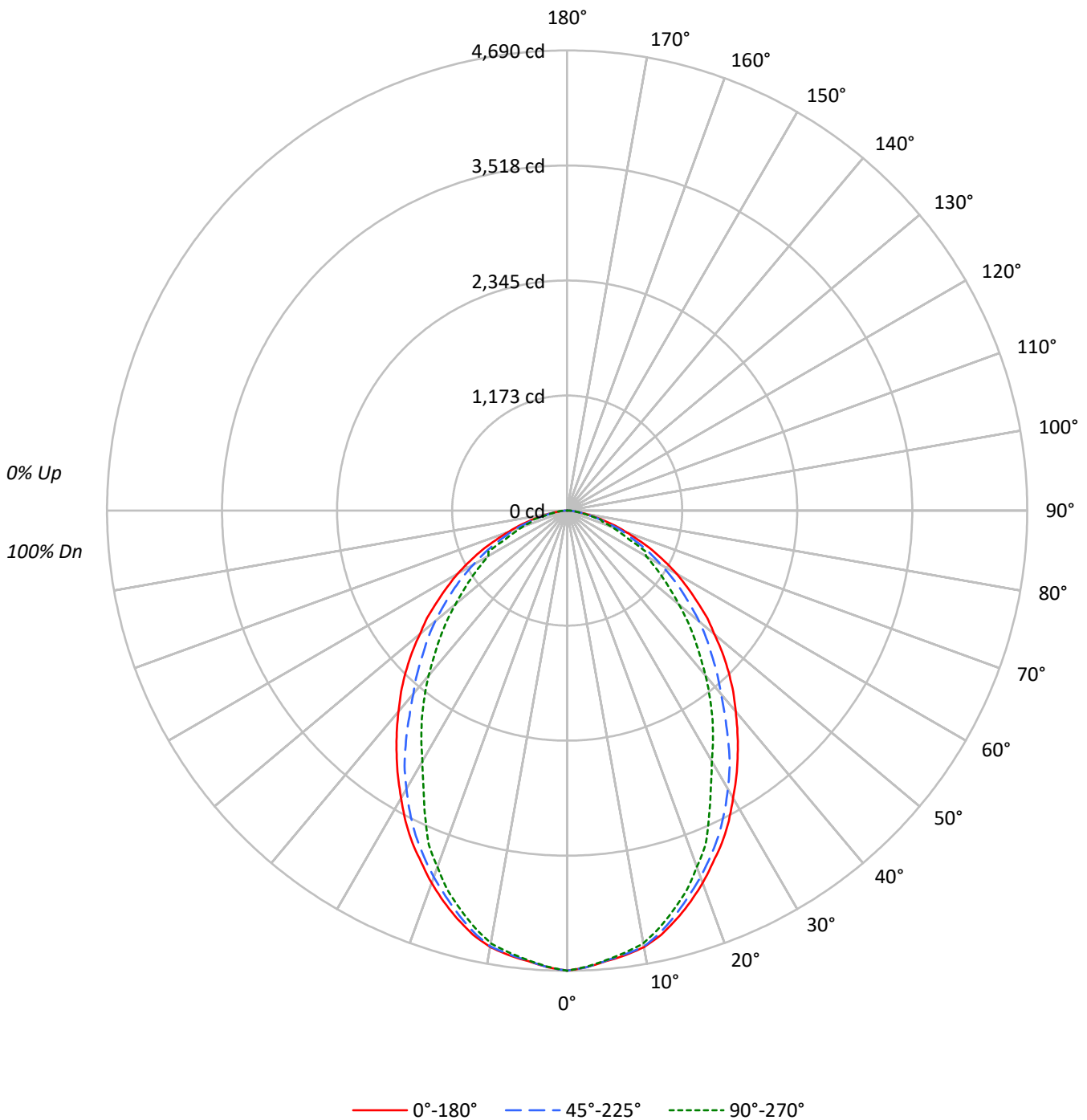
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	6310	6310	6310
5°	6225	6217	6210
10°	6171	6163	6119
15°	6004	5944	5861
20°	5784	5690	5535
25°	5546	5425	5087
30°	5256	5088	4582
35°	4978	4702	4239
40°	4695	4285	3857
45°	4426	3962	3487
50°	4097	3677	3110
55°	3790	3332	2785
60°	3472	2976	2495
65°	3055	2606	2209
70°	2517	2282	1877
75°	2001	1748	1832
80°	1344	1261	1176
85°	837	1005	1172

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4426 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	436.6	4.7
10°-20°	1198.1	13.0
20°-30°	1658.7	18.0
30°-40°	1768.7	19.2
40°-50°	1613.6	17.5
50°-60°	1264.1	13.7
60°-70°	823.9	8.9
70°-80°	365.0	4.0
80°-90°	78.4	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°	3293.4	35.8
0°-40°	5062.1	55.0
0°-60°	7939.8	86.2
0°-90°	9207.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9207.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4690	4690	4690	4690	4690	
5°	4609	4603	4603	4598	4598	437
15°	4310	4310	4267	4224	4207	1212
25°	3736	3714	3654	3524	3427	1715
35°	3031	3009	2863	2646	2581	1895
45°	2326	2277	2082	1908	1833	1792
55°	1616	1567	1420	1252	1187	1449
65°	960	906	819	835	694	946
75°	385	358	336	320	352	413
85°	54	60	65	70	76	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4689.9	4689.9	4689.9	4689.9	4689.9
2.5°	4657.4	4657.4	4657.4	4652.0	4652.0
5°	4608.6	4603.2	4603.2	4597.8	4597.8
7.5°	4570.6	4565.2	4559.8	4554.4	4543.5
10°	4516.4	4516.4	4511.0	4483.9	4478.5
12.5°	4429.7	4424.3	4402.6	4364.6	4353.8
15°	4310.4	4310.4	4267.0	4223.6	4207.4
17.5°	4180.3	4174.8	4120.6	4077.3	4055.6
20°	4039.3	4028.5	3974.2	3903.8	3865.8
22.5°	3882.1	3882.1	3817.0	3724.8	3686.9
25°	3735.7	3714.0	3654.3	3524.2	3426.6
27.5°	3567.6	3535.1	3470.0	3285.7	3171.8
30°	3383.3	3367.0	3274.8	3036.3	2949.5
32.5°	3209.8	3182.6	3085.0	2835.6	2765.2
35°	3030.8	3009.1	2862.8	2645.9	2580.8
37.5°	2851.9	2824.8	2640.5	2467.0	2385.6
40°	2673.0	2640.5	2439.8	2282.6	2195.9
42.5°	2504.9	2461.5	2266.3	2098.3	2000.7
45°	2326.0	2277.2	2082.0	1908.5	1832.6
47.5°	2147.1	2103.7	1924.8	1745.8	1659.1
50°	1957.3	1919.3	1756.7	1577.8	1485.6
52.5°	1800.1	1740.4	1583.2	1404.3	1328.4
55°	1615.7	1566.9	1420.5	1252.5	1187.4
57.5°	1447.6	1398.8	1263.3	1106.1	1051.8
60°	1290.4	1219.9	1106.1	970.5	927.1
62.5°	1116.9	1062.7	965.1	851.2	905.5
65°	959.7	905.5	818.7	835.0	694.0
67.5°	786.2	759.1	683.2	607.3	585.6
70°	639.8	607.3	580.1	498.8	477.1
72.5°	509.7	477.1	439.2	395.8	379.5
75°	385.0	357.8	336.2	319.9	352.4
77.5°	265.7	254.8	238.6	222.3	216.9
80°	173.5	168.1	162.7	157.2	151.8
82.5°	103.0	103.0	103.0	103.0	103.0
85°	54.2	59.6	65.1	70.5	75.9
87.5°	32.5	32.5	38.0	43.4	48.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)