

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: P563805

Luminaire Tested: FSR-24-4-LD4-4HI-50-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563805
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-82-96-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18129.0 lumens
Efficiency: N/A
Efficacy: 104.9 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

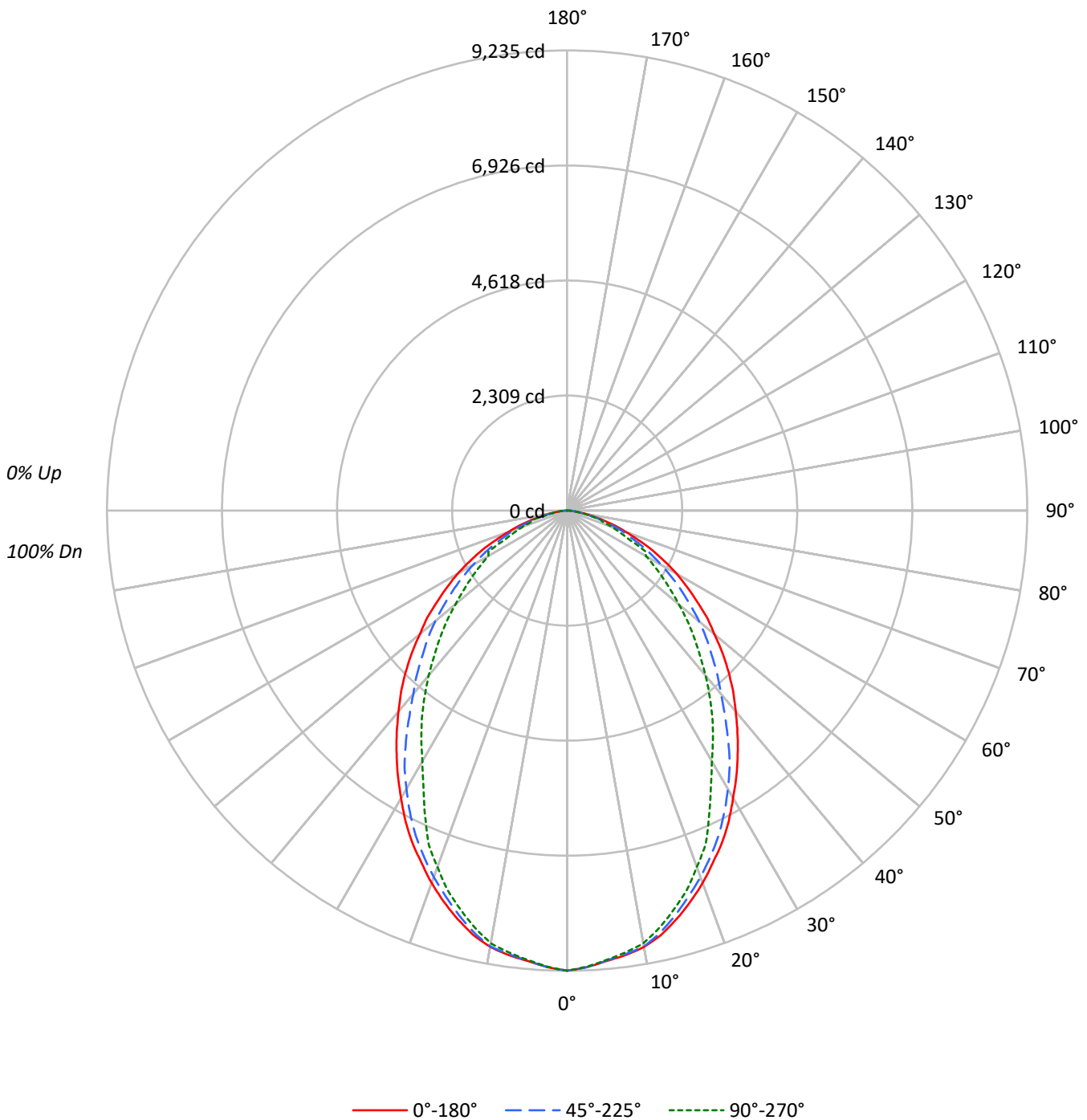
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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													87															
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75													75															
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65													65															
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56													56															
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50													50															
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44													44															
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40													40															
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36													36															
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33													33															
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30													30															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12425	12425	12425
5°	12256	12242	12228
10°	12150	12136	12048
15°	11823	11703	11540
20°	11388	11205	10899
25°	10920	10682	10017
30°	10350	10018	9023
35°	9802	9259	8347
40°	9244	8438	7594
45°	8715	7801	6866
50°	8067	7240	6123
55°	7463	6561	5484
60°	6838	5861	4913
65°	6016	5132	4351
70°	4956	4494	3696
75°	3941	3441	3607
80°	2647	2482	2316
85°	1649	1978	2308

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8715 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	859.6	4.7
10°-20°	2359.2	13.0
20°-30°	3266.1	18.0
30°-40°	3482.6	19.2
40°-50°	3177.2	17.5
50°-60°	2489.1	13.7
60°-70°	1622.2	8.9
70°-80°	718.7	4.0
80°-90°	154.3	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°	6484.9	35.8
0°-40°	9967.5	55.0
0°-60°	15633.7	86.2
0°-90°	18129.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18129.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9235	9235	9235	9235	9235	
5°	9074	9064	9064	9053	9053	861
15°	8487	8487	8402	8316	8284	2386
25°	7356	7313	7196	6939	6747	3377
35°	5968	5925	5637	5210	5082	3731
45°	4580	4484	4100	3758	3608	3528
55°	3181	3085	2797	2466	2338	2854
65°	1890	1783	1612	1644	1366	1862
75°	758	705	662	630	694	812
85°	107	117	128	139	150	148
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9234.7	9234.7	9234.7	9234.7	9234.7
2.5°	9170.6	9170.6	9170.6	9159.9	9159.9
5°	9074.5	9063.9	9063.9	9053.2	9053.2
7.5°	8999.8	8989.1	8978.4	8967.8	8946.4
10°	8893.0	8893.0	8882.4	8829.0	8818.3
12.5°	8722.2	8711.6	8668.8	8594.1	8572.8
15°	8487.4	8487.4	8401.9	8316.5	8284.5
17.5°	8231.1	8220.5	8113.7	8028.3	7985.6
20°	7953.6	7932.2	7825.4	7686.7	7611.9
22.5°	7644.0	7644.0	7515.8	7334.4	7259.6
25°	7355.7	7313.0	7195.6	6939.3	6747.2
27.5°	7024.8	6960.7	6832.6	6469.6	6245.4
30°	6661.8	6629.7	6448.3	5978.5	5807.7
32.5°	6320.1	6266.8	6074.6	5583.5	5444.7
35°	5967.8	5925.1	5636.9	5209.8	5081.7
37.5°	5615.5	5562.2	5199.2	4857.5	4697.4
40°	5263.2	5199.2	4804.2	4494.6	4323.7
42.5°	4932.3	4846.9	4462.5	4131.6	3939.4
45°	4580.0	4483.9	4099.6	3757.9	3608.5
47.5°	4227.7	4142.3	3790.0	3437.6	3266.8
50°	3854.0	3779.3	3459.0	3106.7	2925.2
52.5°	3544.4	3427.0	3117.4	2765.1	2615.6
55°	3181.4	3085.3	2797.1	2466.1	2338.0
57.5°	2850.5	2754.4	2487.5	2177.9	2071.1
60°	2540.9	2402.1	2177.9	1911.0	1825.6
62.5°	2199.2	2092.5	1900.3	1676.1	1782.9
65°	1889.6	1782.9	1612.1	1644.1	1366.5
67.5°	1548.0	1494.6	1345.2	1195.7	1153.0
70°	1259.8	1195.7	1142.3	982.2	939.5
72.5°	1003.5	939.5	864.7	779.3	747.3
75°	758.0	704.6	661.9	629.9	693.9
77.5°	523.1	501.8	469.7	437.7	427.0
80°	341.6	331.0	320.3	309.6	298.9
82.5°	202.8	202.8	202.8	202.8	202.8
85°	106.8	117.4	128.1	138.8	149.5
87.5°	64.1	64.1	74.7	85.4	96.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)