

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: P563703

Luminaire Tested: FSR-24-4-LD4-4HI-40-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563703
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-40-UNV-80-87-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 18132.0 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

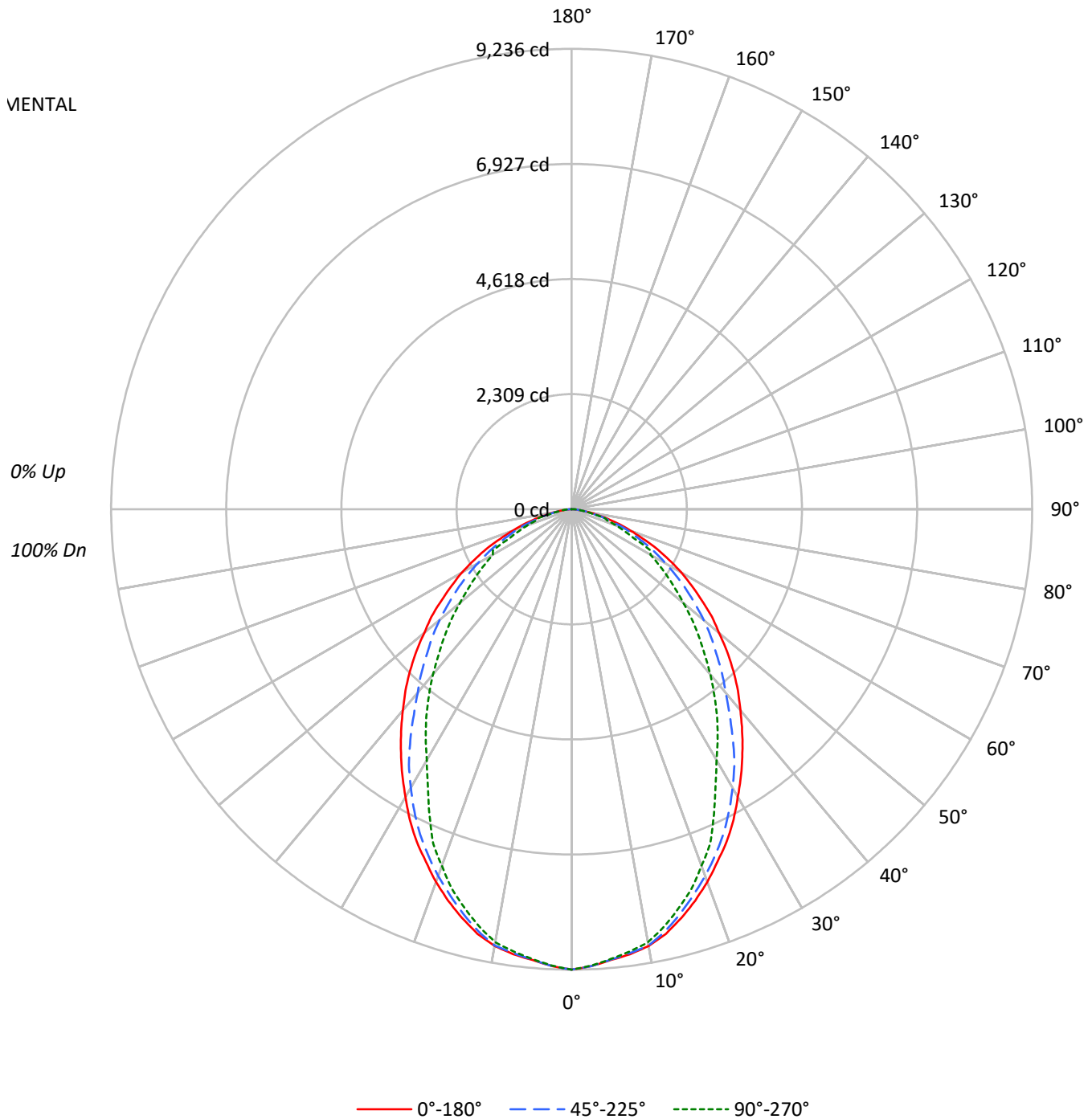
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	12427	12427	12427
5°	12258	12244	12230
10°	12152	12137	12050
15°	11825	11705	11542
20°	11390	11207	10901
25°	10922	10684	10018
30°	10352	10020	9025
35°	9804	9260	8348
40°	9246	8440	7596
45°	8716	7802	6867
50°	8068	7242	6124
55°	7464	6563	5485
60°	6839	5861	4913
65°	6017	5133	4351
70°	4957	4495	3696
75°	3941	3441	3608
80°	2648	2482	2317
85°	1649	1978	2308

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8716 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	859.8	4.7
10°-20°	2359.6	13.0
20°-30°	3266.6	18.0
30°-40°	3483.2	19.2
40°-50°	3177.7	17.5
50°-60°	2489.5	13.7
60°-70°	1622.5	8.9
70°-80°	718.8	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°	6486.0	35.8
0°-40°	9969.2	55.0
0°-60°	15636.3	86.2
0°-90°	18132.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18132.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9236	9236	9236	9236	9236	
5°	9076	9065	9065	9055	9055	862
15°	8489	8489	8403	8318	8286	2386
25°	7357	7314	7197	6940	6748	3378
35°	5969	5926	5638	5211	5083	3732
45°	4581	4485	4100	3758	3609	3529
55°	3182	3086	2798	2466	2338	2854
65°	1890	1783	1612	1644	1367	1863
75°	758	705	662	630	694	813
85°	107	118	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°	9236.2	9236.2	9236.2	9236.2	9236.2
2.5°	9172.1	9172.1	9172.1	9161.5	9161.5
5°	9076.0	9065.4	9065.4	9054.7	9054.7
7.5°	9001.3	8990.6	8979.9	8969.3	8947.9
10°	8894.5	8894.5	8883.8	8830.4	8819.8
12.5°	8723.7	8713.0	8670.3	8595.5	8574.2
15°	8488.8	8488.8	8403.3	8317.9	8285.9
17.5°	8232.5	8221.8	8115.0	8029.6	7986.9
20°	7954.9	7933.5	7826.7	7687.9	7613.2
22.5°	7645.2	7645.2	7517.1	7335.6	7260.8
25°	7356.9	7314.2	7196.8	6940.5	6748.3
27.5°	7025.9	6961.9	6833.7	6470.7	6246.4
30°	6662.9	6630.8	6449.3	5979.5	5808.7
32.5°	6321.2	6267.8	6075.6	5584.4	5445.6
35°	5968.8	5926.1	5637.8	5210.7	5082.6
37.5°	5616.5	5563.1	5200.0	4858.3	4698.2
40°	5264.1	5200.0	4805.0	4495.3	4324.5
42.5°	4933.1	4847.7	4463.3	4132.3	3940.1
45°	4580.7	4484.6	4100.2	3758.5	3609.1
47.5°	4228.4	4142.9	3790.6	3438.2	3267.4
50°	3854.6	3779.9	3459.6	3107.2	2925.7
52.5°	3545.0	3427.5	3117.9	2765.5	2616.0
55°	3182.0	3085.9	2797.6	2466.5	2338.4
57.5°	2850.9	2754.8	2487.9	2178.2	2071.5
60°	2541.3	2402.5	2178.2	1911.3	1825.9
62.5°	2199.6	2092.8	1900.6	1676.4	1783.2
65°	1890.0	1783.2	1612.3	1644.4	1366.7
67.5°	1548.3	1494.9	1345.4	1195.9	1153.2
70°	1260.0	1195.9	1142.5	982.3	939.6
72.5°	1003.7	939.6	864.9	779.5	747.4
75°	758.1	704.7	662.0	630.0	694.0
77.5°	523.2	501.9	469.8	437.8	427.1
80°	341.7	331.0	320.3	309.7	299.0
82.5°	202.9	202.9	202.9	202.9	202.9
85°	106.8	117.5	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)