

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: P563159

Luminaire Tested: FSR-24-4-LD4-3HI-40-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563159
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-40-UNV-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12647.0 lumens
Efficiency: N/A
Efficacy: 97.6 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

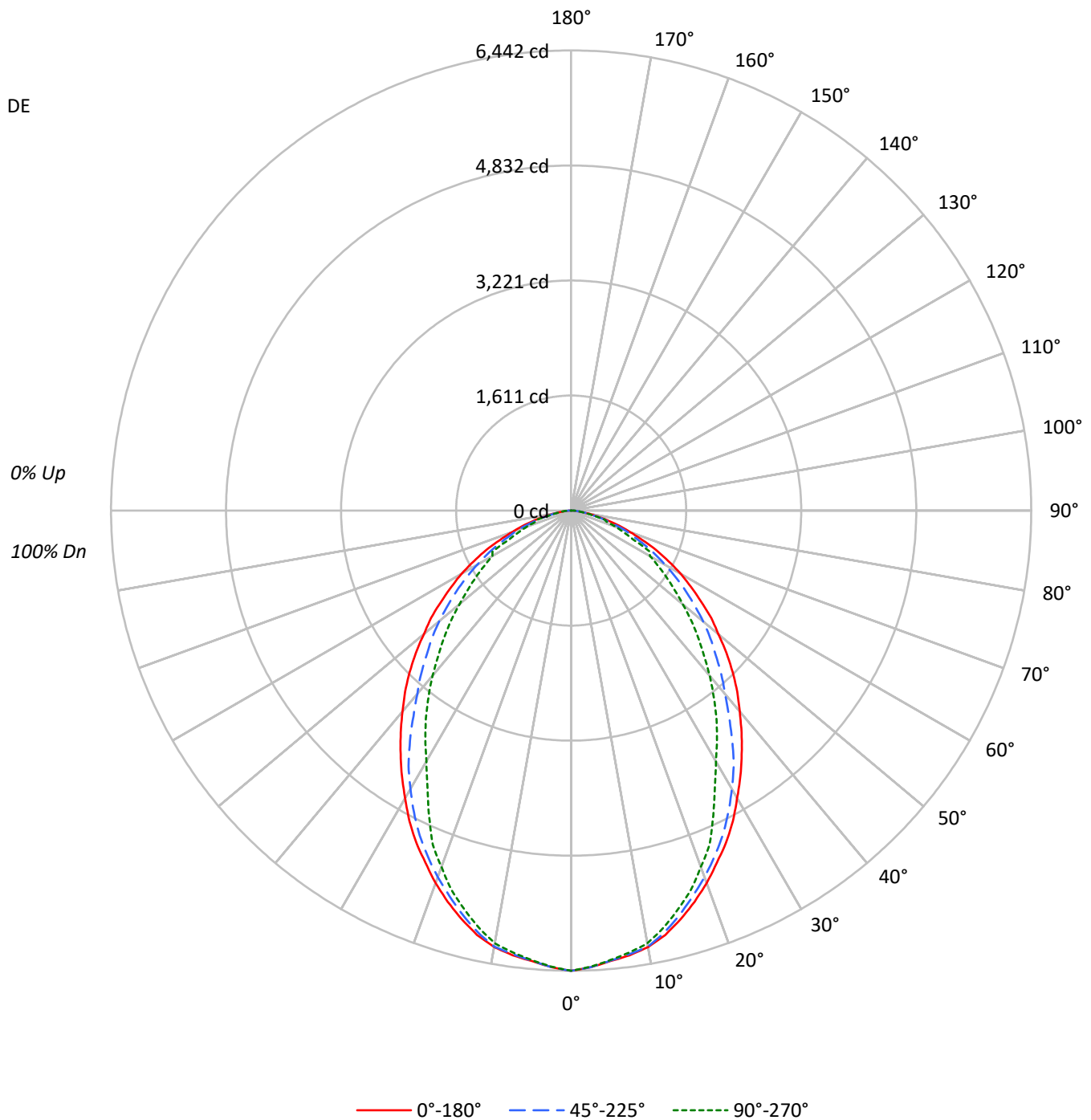
Input Watts (W): 129.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8668	8668	8668
5°	8550	8540	8530
10°	8476	8466	8405
15°	8248	8165	8050
20°	7945	7817	7603
25°	7618	7452	6988
30°	7220	6989	6295
35°	6838	6459	5823
40°	6449	5886	5298
45°	6079	5442	4790
50°	5628	5051	4272
55°	5206	4577	3826
60°	4770	4088	3427
65°	4197	3580	3035
70°	3457	3135	2578
75°	2749	2401	2517
80°	1846	1731	1616
85°	1150	1380	1610

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6079 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	599.7	4.7
10°-20°	1645.8	13.0
20°-30°	2278.5	18.0
30°-40°	2429.5	19.2
40°-50°	2216.4	17.5
50°-60°	1736.4	13.7
60°-70°	1131.7	8.9
70°-80°	501.4	4.0
80°-90°	107.6	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°	4523.9	35.8
0°-40°	6953.5	55.0
0°-60°	10906.3	86.2
0°-90°	12647.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12647.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6442	6442	6442	6442	6442	
5°	6330	6323	6323	6316	6316	601
15°	5921	5921	5861	5802	5779	1665
25°	5131	5102	5020	4841	4707	2356
35°	4163	4133	3932	3634	3545	2603
45°	3195	3128	2860	2622	2517	2461
55°	2219	2152	1951	1720	1631	1991
65°	1318	1244	1125	1147	953	1299
75°	529	492	462	439	484	567
85°	74	82	89	97	104	103
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6442.2	6442.2	6442.2	6442.2	6442.2
2.5°	6397.5	6397.5	6397.5	6390.1	6390.1
5°	6330.5	6323.1	6323.1	6315.6	6315.6
7.5°	6278.4	6270.9	6263.5	6256.0	6241.1
10°	6203.9	6203.9	6196.4	6159.2	6151.8
12.5°	6084.7	6077.3	6047.5	5995.4	5980.5
15°	5920.9	5920.9	5861.3	5801.7	5779.4
17.5°	5742.1	5734.7	5660.2	5600.6	5570.8
20°	5548.5	5533.6	5459.1	5362.3	5310.2
22.5°	5332.5	5332.5	5243.1	5116.5	5064.4
25°	5131.4	5101.6	5019.7	4841.0	4706.9
27.5°	4900.6	4855.9	4766.5	4513.3	4356.9
30°	4647.3	4625.0	4498.4	4170.7	4051.5
32.5°	4409.0	4371.8	4237.7	3895.1	3798.3
35°	4163.2	4133.4	3932.4	3634.5	3545.1
37.5°	3917.5	3880.2	3627.0	3388.7	3277.0
40°	3671.7	3627.0	3351.4	3135.5	3016.3
42.5°	3440.8	3381.2	3113.1	2882.2	2748.2
45°	3195.0	3128.0	2859.9	2621.6	2517.3
47.5°	2949.3	2889.7	2643.9	2398.1	2279.0
50°	2688.6	2636.5	2413.0	2167.3	2040.7
52.5°	2472.6	2390.7	2174.7	1928.9	1824.7
55°	2219.4	2152.4	1951.3	1720.4	1631.0
57.5°	1988.5	1921.5	1735.3	1519.3	1444.8
60°	1772.5	1675.7	1519.3	1333.1	1273.5
62.5°	1534.2	1459.7	1325.7	1169.3	1243.8
65°	1318.2	1243.8	1124.6	1146.9	953.3
67.5°	1079.9	1042.7	938.4	834.1	804.3
70°	878.8	834.1	796.9	685.2	655.4
72.5°	700.1	655.4	603.3	543.7	521.3
75°	528.8	491.5	461.8	439.4	484.1
77.5°	364.9	350.0	327.7	305.4	297.9
80°	238.3	230.9	223.4	216.0	208.5
82.5°	141.5	141.5	141.5	141.5	141.5
85°	74.5	81.9	89.4	96.8	104.3
87.5°	44.7	44.7	52.1	59.6	67.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)