

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: P589921

Luminaire Tested: FSR-24-2-LD4-1HI-50-UNV-81-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589921
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-1HI-50-UNV-81-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1972.0 lumens
Efficiency: N/A
Efficacy: 91.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

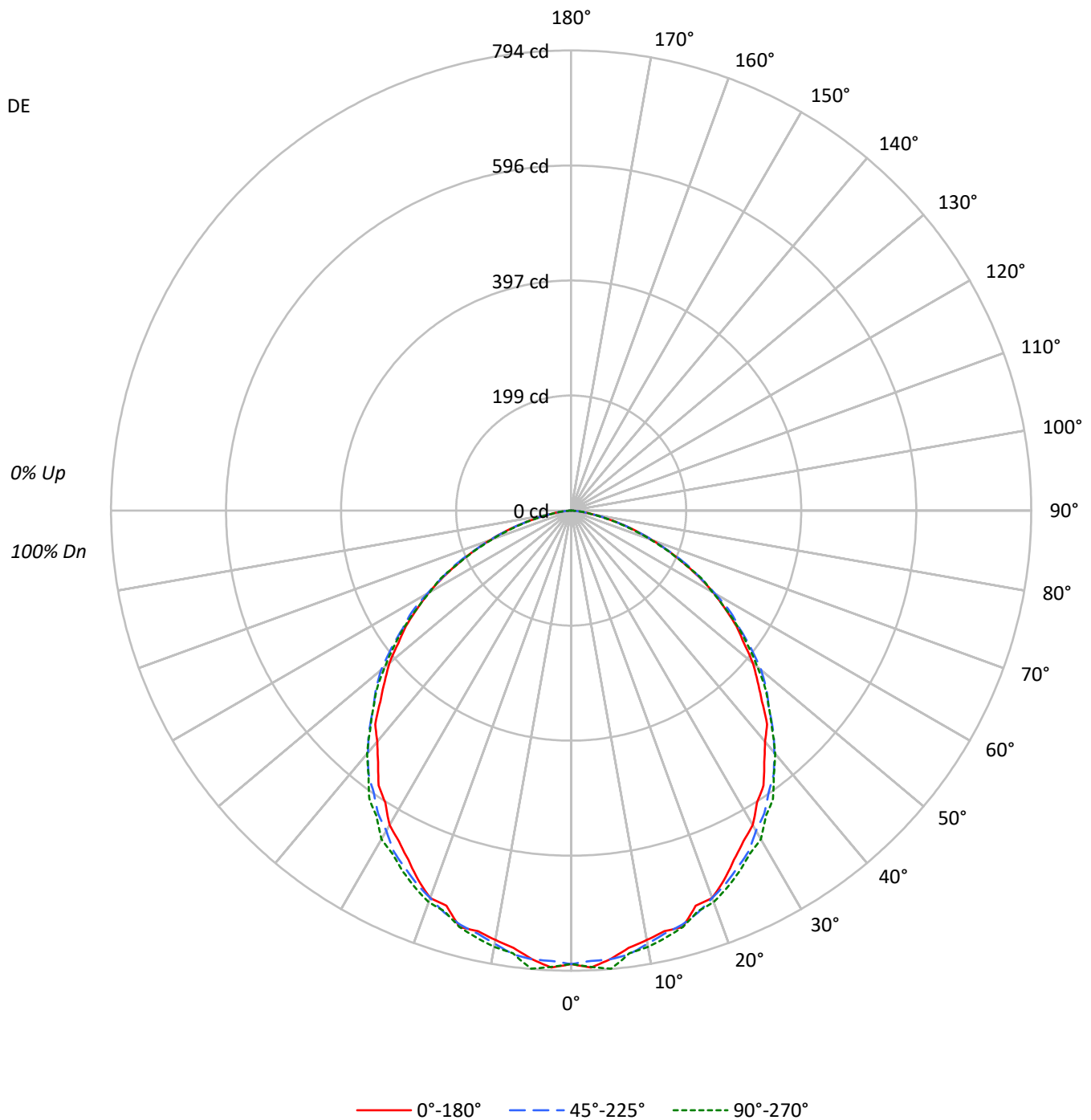
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2105	2105	2105
5°	2099	2099	2144
10°	2056	2074	2089
15°	2072	2061	2072
20°	2037	2037	2059
25°	1974	2018	2040
30°	1948	1982	2034
35°	1902	1951	1995
40°	1828	1916	1924
45°	1772	1835	1838
50°	1714	1791	1757
55°	1633	1665	1653
60°	1527	1542	1515
65°	1362	1396	1352
70°	1168	1172	1140
75°	925	923	888
80°	620	603	580
85°	337	333	312

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1883 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.6	3.7
10°-20°	208.6	10.6
20°-30°	312.5	15.8
30°-40°	370.4	18.8
40°-50°	371.1	18.8
50°-60°	315.0	16.0
60°-70°	212.4	10.8
70°-80°	93.3	4.7
80°-90°	15.1	0.8
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°	594.7	30.2
0°-40°	965.1	48.9
0°-60°	1651.2	83.7
0°-90°	1972.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1972.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	782	782	782	782	782	
5°	777	775	777	775	794	73
15°	744	735	740	744	744	207
25°	665	669	680	688	687	307
35°	579	581	594	608	607	359
45°	466	474	482	495	483	360
55°	348	346	355	352	352	310
65°	214	211	219	211	212	213
75°	89	87	89	82	85	95
85°	11	11	11	10	10	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	782.4	782.4	782.4	782.4	782.4
2.5°	789.2	783.2	777.7	784.2	788.1
5°	776.9	775.1	777.2	774.9	793.6
7.5°	760.9	767.9	771.9	769.4	770.5
10°	752.4	750.0	759.0	765.3	764.4
12.5°	743.3	747.0	747.5	754.3	754.9
15°	743.8	735.3	739.8	743.6	743.9
17.5°	715.0	724.2	727.4	736.2	725.3
20°	711.4	704.7	711.4	720.4	719.0
22.5°	689.7	682.1	696.7	704.7	704.1
25°	665.0	668.7	679.6	688.5	687.1
27.5°	643.4	647.7	663.2	675.5	667.6
30°	626.8	624.6	637.8	648.7	654.7
32.5°	597.0	604.6	620.0	630.8	625.0
35°	578.9	580.6	594.0	607.8	607.4
37.5°	547.3	555.2	574.1	578.0	574.4
40°	520.3	528.3	545.3	549.5	547.8
42.5°	500.4	501.8	516.4	521.2	513.6
45°	465.7	474.4	482.3	494.7	483.0
47.5°	436.2	440.3	457.2	460.6	454.4
50°	409.5	410.9	427.9	423.8	419.8
52.5°	375.8	381.8	391.4	390.6	385.8
55°	348.1	345.8	354.9	352.5	352.4
57.5°	314.9	318.9	326.4	322.6	316.4
60°	283.8	283.9	286.6	282.3	281.5
62.5°	249.1	250.3	250.9	245.6	254.3
65°	213.9	211.0	219.3	210.9	212.4
67.5°	181.4	182.9	182.0	176.8	178.8
70°	148.5	150.3	149.0	143.1	144.9
72.5°	118.4	116.2	117.6	110.1	113.6
75°	89.0	87.2	88.8	82.5	85.4
77.5°	60.6	62.0	61.0	57.7	59.6
80°	40.0	38.9	38.9	37.0	37.4
82.5°	23.3	22.2	21.9	21.3	22.2
85°	10.9	10.6	10.8	10.5	10.1
87.5°	3.9	4.0	4.0	3.8	3.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)