

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: P590080

Luminaire Tested: FSR-24-2-LD4-1STD-40-UNV-81-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590080
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-LD4-1STD-40-UNV-81-87-EDD
Description: 2X2 FSR TROFFER WITH .156 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: 1755.0 lumens
Efficiency: N/A
Efficacy: 105.7 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

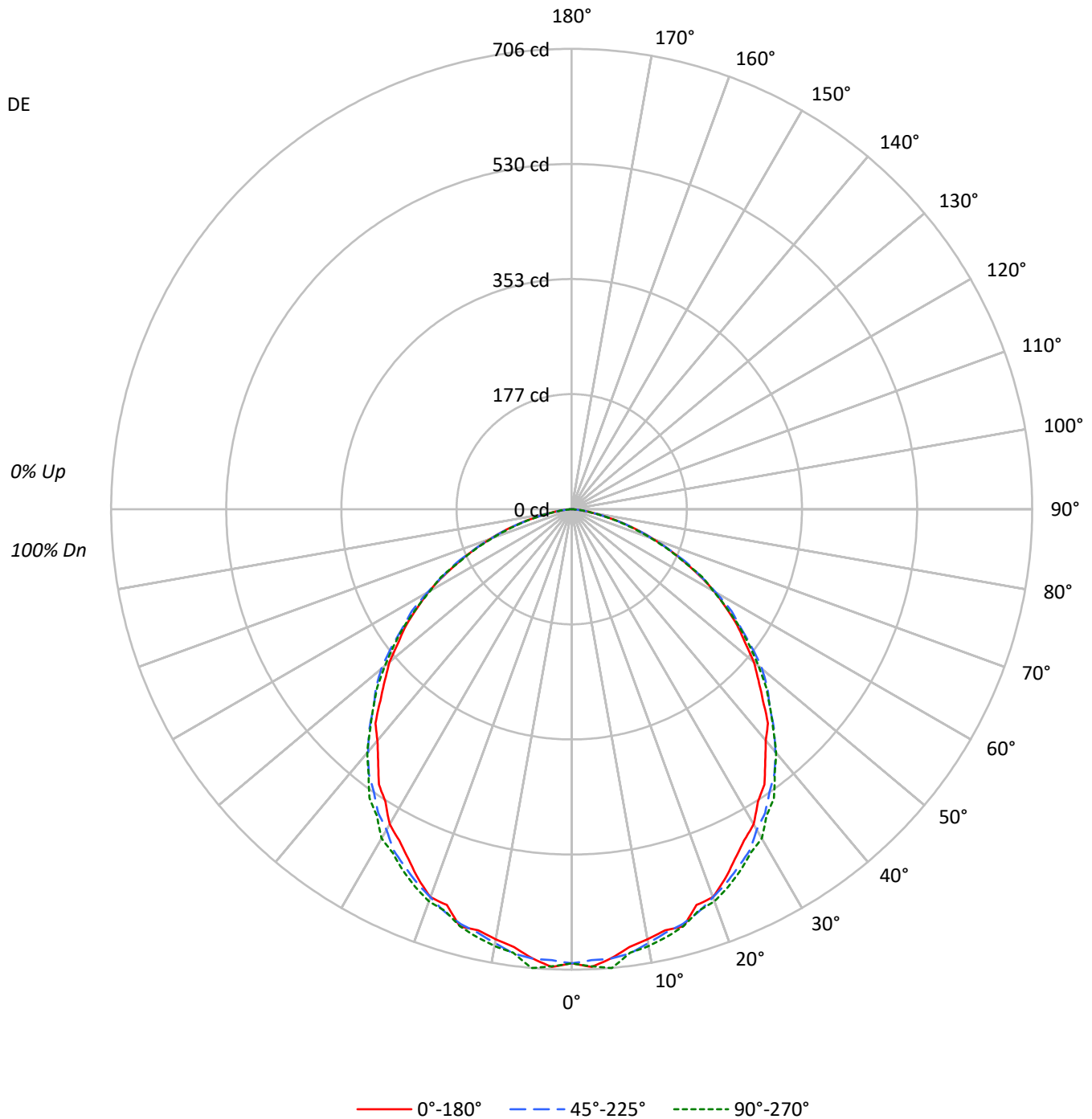
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1874	1874	1874
5°	1868	1868	1908
10°	1830	1846	1859
15°	1844	1834	1845
20°	1813	1813	1832
25°	1757	1796	1816
30°	1733	1764	1811
35°	1692	1737	1776
40°	1626	1705	1713
45°	1577	1633	1636
50°	1526	1595	1564
55°	1453	1482	1471
60°	1359	1373	1348
65°	1212	1243	1203
70°	1040	1043	1014
75°	823	821	790
80°	552	536	516
85°	299	296	278

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1676 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.5	3.7
10°-20°	185.6	10.6
20°-30°	278.1	15.8
30°-40°	329.6	18.8
40°-50°	330.2	18.8
50°-60°	280.3	16.0
60°-70°	189.0	10.8
70°-80°	83.0	4.7
80°-90°	13.5	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°	529.3	30.2
0°-40°	858.9	48.9
0°-60°	1469.5	83.7
0°-90°	1755.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1755.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	696	696	696	696	696	
5°	691	690	692	690	706	65
15°	662	654	658	662	662	184
25°	592	595	605	613	612	274
35°	515	517	529	541	540	320
45°	414	422	429	440	430	321
55°	310	308	316	314	314	276
65°	190	188	195	188	189	189
75°	79	78	79	74	76	85
85°	10	9	10	9	9	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	696.3	696.3	696.3	696.3	696.3
2.5°	702.4	697.1	692.1	697.9	701.4
5°	691.4	689.8	691.7	689.6	706.2
7.5°	677.2	683.4	687.0	684.7	685.7
10°	669.6	667.5	675.5	681.1	680.2
12.5°	661.5	664.8	665.2	671.3	671.8
15°	662.0	654.4	658.4	661.8	662.1
17.5°	636.3	644.6	647.3	655.2	645.5
20°	633.1	627.1	633.1	641.1	639.9
22.5°	613.8	607.1	620.0	627.1	626.7
25°	591.9	595.1	604.8	612.7	611.5
27.5°	572.6	576.4	590.2	601.1	594.1
30°	557.8	555.9	567.6	577.3	582.7
32.5°	531.3	538.1	551.8	561.4	556.3
35°	515.2	516.7	528.7	540.9	540.5
37.5°	487.0	494.1	510.9	514.4	511.2
40°	463.0	470.1	485.3	489.0	487.5
42.5°	445.3	446.6	459.6	463.8	457.1
45°	414.5	422.2	429.2	440.3	429.9
47.5°	388.2	391.8	406.9	409.9	404.4
50°	364.4	365.7	380.9	377.2	373.6
52.5°	334.5	339.8	348.3	347.6	343.4
55°	309.8	307.8	315.8	313.7	313.6
57.5°	280.2	283.8	290.5	287.1	281.6
60°	252.6	252.6	255.1	251.2	250.5
62.5°	221.7	222.8	223.3	218.6	226.3
65°	190.3	187.8	195.2	187.7	189.0
67.5°	161.5	162.7	162.0	157.3	159.1
70°	132.2	133.8	132.6	127.3	128.9
72.5°	105.4	103.4	104.7	98.0	101.1
75°	79.2	77.6	79.0	73.5	76.0
77.5°	53.9	55.2	54.3	51.3	53.0
80°	35.6	34.6	34.6	32.9	33.3
82.5°	20.8	19.8	19.5	19.0	19.8
85°	9.7	9.4	9.6	9.4	9.0
87.5°	3.5	3.6	3.6	3.4	3.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)