

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: P590121

Luminaire Tested: FSR-24-2-LD4-1STD-50-UNV-82-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590121
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-50-UNV-82-88-EDD
Description: 2X2 FSR TROFFER WITH .187 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: 1574.0 lumens
Efficiency: N/A
Efficacy: 94.8 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

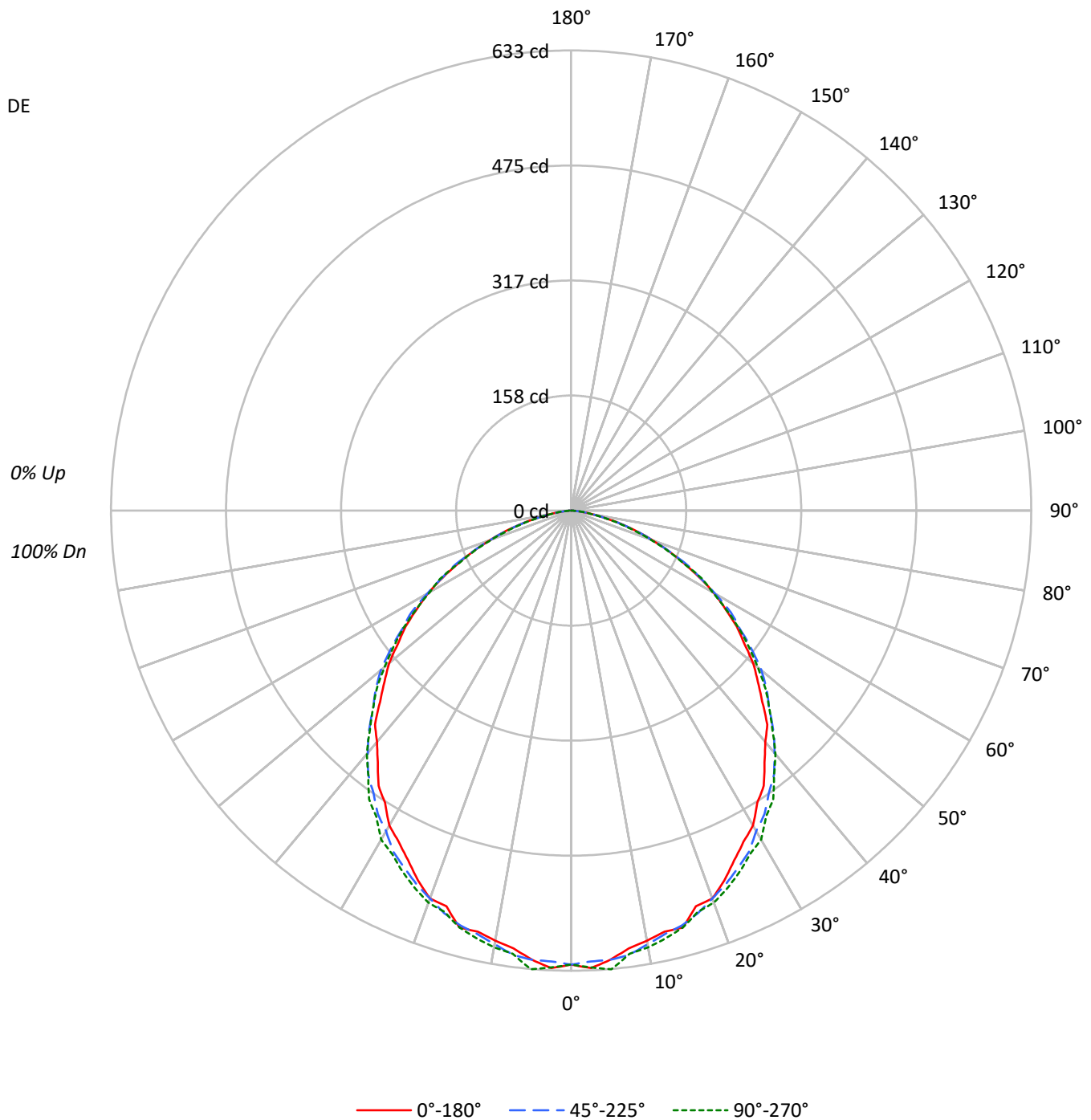
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1681	1681	1681
5°	1675	1676	1711
10°	1641	1655	1667
15°	1654	1645	1654
20°	1626	1626	1643
25°	1576	1610	1628
30°	1555	1582	1624
35°	1518	1557	1593
40°	1459	1529	1536
45°	1415	1465	1467
50°	1368	1430	1402
55°	1304	1329	1320
60°	1219	1231	1209
65°	1087	1115	1079
70°	932	935	910
75°	738	737	708
80°	494	480	462
85°	269	266	250

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1503 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.7	3.7
10°-20°	166.5	10.6
20°-30°	249.4	15.8
30°-40°	295.6	18.8
40°-50°	296.2	18.8
50°-60°	251.4	16.0
60°-70°	169.5	10.8
70°-80°	74.5	4.7
80°-90°	12.1	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°	474.7	30.2
0°-40°	770.3	48.9
0°-60°	1317.9	83.7
0°-90°	1574.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1574.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	624	624	624	624	624	
5°	620	619	620	618	633	58
15°	594	587	590	594	594	165
25°	531	534	542	550	548	245
35°	462	463	474	485	485	287
45°	372	379	385	395	386	288
55°	278	276	283	281	281	247
65°	171	168	175	168	170	170
75°	71	70	71	66	68	76
85°	9	8	9	8	8	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	624.5	624.5	624.5	624.5	624.5
2.5°	629.9	625.2	620.7	625.9	629.0
5°	620.1	618.6	620.3	618.5	633.4
7.5°	607.3	612.9	616.1	614.1	615.0
10°	600.6	598.6	605.8	610.8	610.1
12.5°	593.3	596.2	596.6	602.0	602.5
15°	593.7	586.9	590.5	593.6	593.8
17.5°	570.7	578.1	580.6	587.6	578.9
20°	567.8	562.4	567.8	575.0	573.9
22.5°	550.5	544.5	556.1	562.4	562.0
25°	530.8	533.7	542.4	549.5	548.4
27.5°	513.6	517.0	529.4	539.1	532.8
30°	500.3	498.6	509.1	517.8	522.6
32.5°	476.5	482.6	494.9	503.5	498.9
35°	462.0	463.4	474.1	485.1	484.8
37.5°	436.8	443.2	458.3	461.3	458.5
40°	415.3	421.6	435.3	438.6	437.2
42.5°	399.4	400.5	412.2	416.0	410.0
45°	371.7	378.7	385.0	394.9	385.5
47.5°	348.2	351.4	365.0	367.6	362.7
50°	326.8	327.9	341.6	338.3	335.0
52.5°	300.0	304.7	312.4	311.7	307.9
55°	277.9	276.0	283.3	281.3	281.3
57.5°	251.3	254.6	260.5	257.5	252.6
60°	226.5	226.6	228.8	225.3	224.7
62.5°	198.8	199.8	200.3	196.0	203.0
65°	170.7	168.4	175.1	168.4	169.5
67.5°	144.8	146.0	145.3	141.1	142.7
70°	118.5	120.0	118.9	114.2	115.6
72.5°	94.5	92.7	93.9	87.9	90.6
75°	71.0	69.6	70.9	65.9	68.1
77.5°	48.4	49.5	48.7	46.0	47.6
80°	31.9	31.0	31.0	29.5	29.8
82.5°	18.6	17.7	17.5	17.0	17.7
85°	8.7	8.5	8.6	8.4	8.1
87.5°	3.1	3.2	3.2	3.1	2.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)