

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: P590248

Luminaire Tested: FSR-24-2-LD4-2LO-35-UNV-82-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590248
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-LD4-2LO-35-UNV-82-87-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

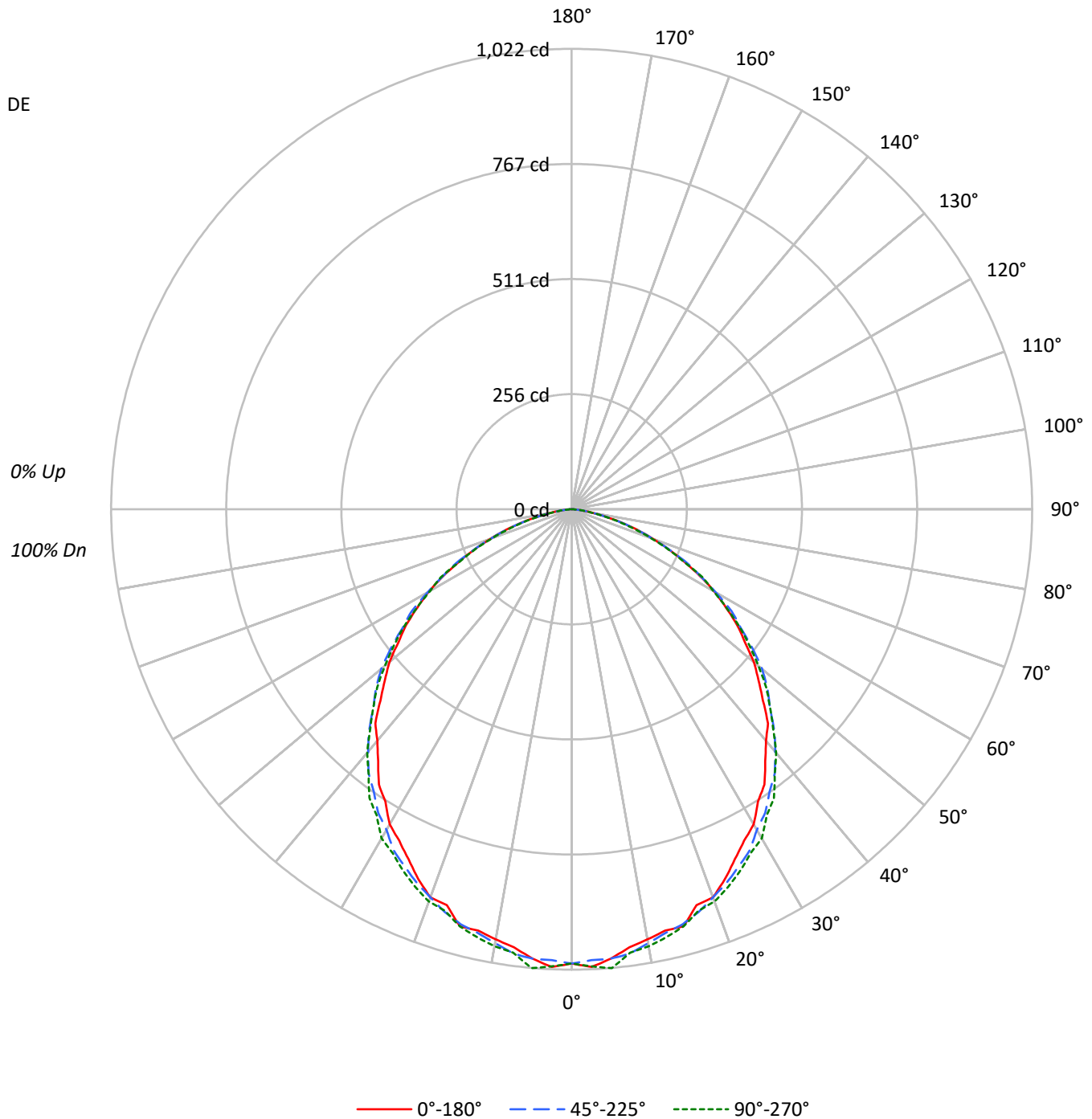
Lumens per Lamp: N/A
Luminaire Lumens: 2541.0 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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°	2713	2713	2713
5°	2704	2705	2762
10°	2649	2672	2691
15°	2670	2656	2671
20°	2625	2625	2653
25°	2544	2600	2629
30°	2509	2554	2622
35°	2450	2514	2571
40°	2355	2468	2479
45°	2284	2365	2369
50°	2209	2308	2264
55°	2105	2145	2130
60°	1968	1988	1952
65°	1755	1799	1742
70°	1506	1511	1469
75°	1193	1189	1144
80°	798	776	747
85°	435	429	401

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2426 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.8	3.7
10°-20°	268.8	10.6
20°-30°	402.7	15.8
30°-40°	477.3	18.8
40°-50°	478.2	18.8
50°-60°	405.9	16.0
60°-70°	273.6	10.8
70°-80°	120.2	4.7
80°-90°	19.5	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°	766.3	30.2
0°-40°	1243.6	48.9
0°-60°	2127.6	83.7
0°-90°	2541.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2541.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1008	1008	1008	1008	1008	
5°	1001	999	1001	998	1022	94
15°	958	947	953	958	959	267
25°	857	862	876	887	885	396
35°	746	748	765	783	783	463
45°	600	611	622	638	622	464
55°	449	446	457	454	454	399
65°	276	272	283	272	274	274
75°	115	112	114	106	110	123
85°	14	14	14	14	13	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1008.2	1008.2	1008.2	1008.2	1008.2
2.5°	1016.9	1009.2	1002.1	1010.4	1015.5
5°	1001.0	998.7	1001.4	998.4	1022.5
7.5°	980.5	989.5	994.7	991.4	992.8
10°	969.5	966.4	978.0	986.1	984.9
12.5°	957.8	962.5	963.2	971.9	972.7
15°	958.5	947.4	953.3	958.2	958.6
17.5°	921.2	933.2	937.3	948.6	934.5
20°	916.7	908.0	916.7	928.3	926.5
22.5°	888.7	878.9	897.7	908.0	907.3
25°	856.9	861.6	875.7	887.1	885.3
27.5°	829.1	834.6	854.6	870.3	860.2
30°	807.6	804.9	821.8	835.9	843.7
32.5°	769.2	779.1	798.9	812.8	805.4
35°	745.9	748.1	765.4	783.1	782.6
37.5°	705.2	715.4	739.8	744.7	740.2
40°	670.4	680.7	702.7	708.0	705.8
42.5°	644.8	646.6	665.5	671.6	661.8
45°	600.1	611.3	621.5	637.5	622.4
47.5°	562.1	567.3	589.2	593.5	585.5
50°	527.6	529.4	551.4	546.1	540.9
52.5°	484.3	491.9	504.3	503.3	497.1
55°	448.6	445.6	457.3	454.2	454.1
57.5°	405.8	411.0	420.6	415.6	407.7
60°	365.7	365.8	369.3	363.7	362.7
62.5°	321.0	322.6	323.4	316.5	327.7
65°	275.6	271.9	282.6	271.8	273.6
67.5°	233.8	235.6	234.6	227.8	230.4
70°	191.4	193.7	192.0	184.3	186.7
72.5°	152.6	149.7	151.5	141.9	146.3
75°	114.7	112.3	114.4	106.4	110.0
77.5°	78.1	79.9	78.6	74.3	76.8
80°	51.5	50.1	50.1	47.6	48.2
82.5°	30.1	28.6	28.2	27.5	28.6
85°	14.1	13.7	13.9	13.5	13.0
87.5°	5.1	5.2	5.2	4.9	4.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)