

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: P590272

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

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590272
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-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

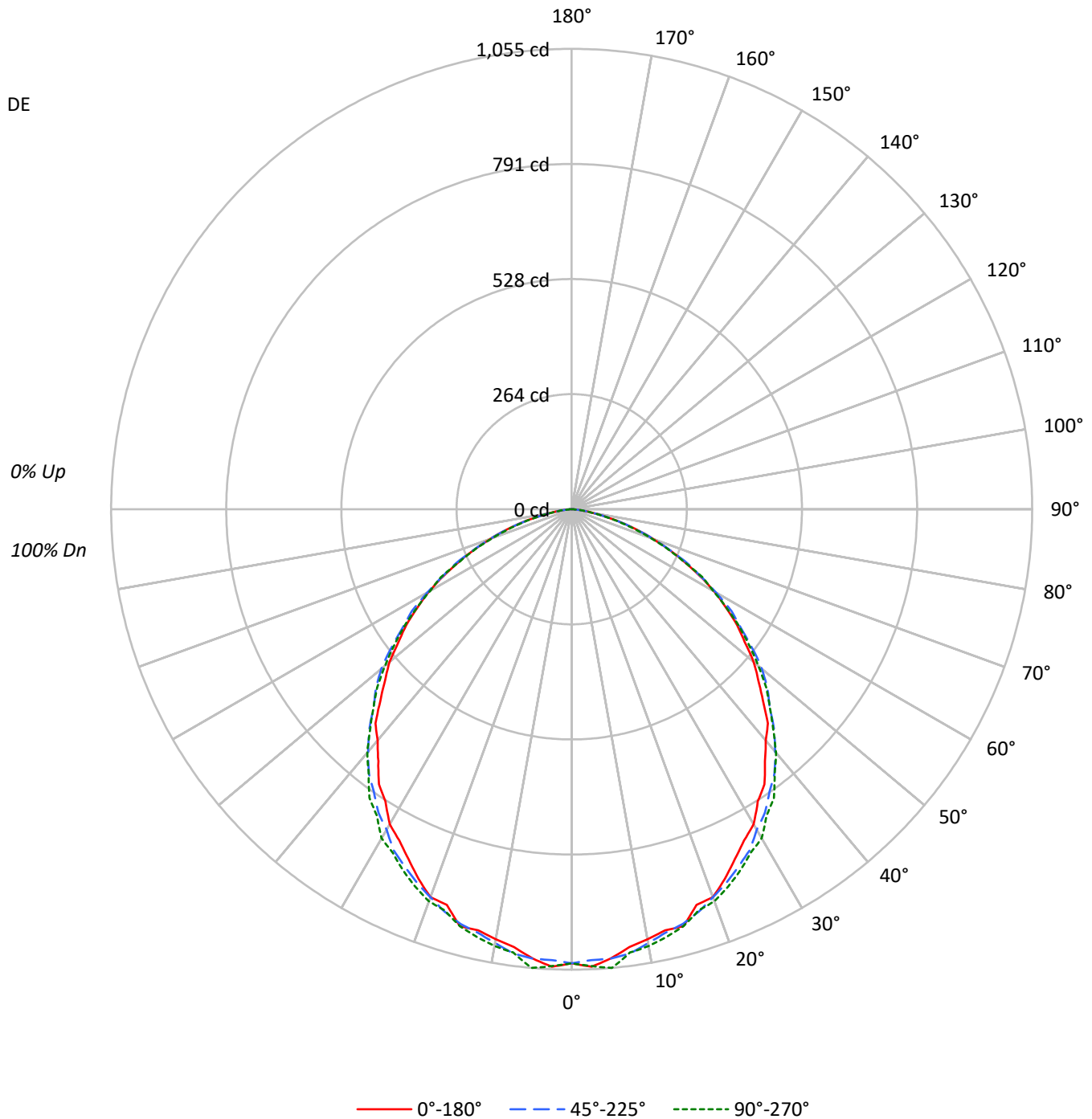
Lumens per Lamp: N/A
Luminaire Lumens: 2622.0 lumens
Efficiency: N/A
Efficacy: 112.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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					100			
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86					86			
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73					73			
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62					62			
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53					53			
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46					46			
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41					41			
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36					36			
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32					32			
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29					29			
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26					26			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2799	2799	2799
5°	2790	2791	2850
10°	2734	2758	2777
15°	2755	2740	2756
20°	2709	2709	2738
25°	2626	2683	2712
30°	2589	2635	2705
35°	2529	2595	2653
40°	2430	2547	2558
45°	2356	2441	2444
50°	2279	2382	2336
55°	2172	2214	2198
60°	2031	2051	2014
65°	1811	1857	1798
70°	1554	1559	1515
75°	1230	1228	1180
80°	824	801	770
85°	448	445	414

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2503 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.9	3.7
10°-20°	277.3	10.6
20°-30°	415.5	15.8
30°-40°	492.5	18.8
40°-50°	493.4	18.8
50°-60°	418.8	16.0
60°-70°	282.4	10.8
70°-80°	124.1	4.7
80°-90°	20.2	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°	790.7	30.2
0°-40°	1283.2	48.9
0°-60°	2195.4	83.7
0°-90°	2622.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2622.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1040	1040	1040	1040	1040	
5°	1033	1030	1033	1030	1055	97
15°	989	978	984	989	989	276
25°	884	889	904	915	914	409
35°	770	772	790	808	808	478
45°	619	631	641	658	642	479
55°	463	460	472	469	468	412
65°	284	281	292	280	282	283
75°	118	116	118	110	114	127
85°	14	14	14	14	13	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1040.3	1040.3	1040.3	1040.3	1040.3
2.5°	1049.3	1041.4	1034.0	1042.6	1047.9
5°	1033.0	1030.5	1033.4	1030.3	1055.1
7.5°	1011.7	1021.0	1026.4	1023.0	1024.5
10°	1000.4	997.2	1009.2	1017.5	1016.3
12.5°	988.4	993.2	993.9	1002.9	1003.7
15°	989.0	977.6	983.7	988.8	989.2
17.5°	950.6	963.0	967.1	978.8	964.3
20°	945.9	936.9	945.9	957.9	956.0
22.5°	917.0	907.0	926.3	936.9	936.2
25°	884.3	889.1	903.6	915.4	913.5
27.5°	855.5	861.2	881.8	898.1	887.6
30°	833.3	830.5	848.0	862.5	870.6
32.5°	793.7	803.9	824.3	838.7	831.1
35°	769.7	772.0	789.8	808.1	807.6
37.5°	727.6	738.2	763.4	768.5	763.8
40°	691.8	702.4	725.1	730.6	728.3
42.5°	665.3	667.2	686.7	693.0	682.9
45°	619.2	630.8	641.3	657.8	642.2
47.5°	580.0	585.4	608.0	612.4	604.2
50°	544.4	546.3	569.0	563.5	558.1
52.5°	499.7	507.6	520.4	519.3	513.0
55°	462.9	459.8	471.9	468.7	468.5
57.5°	418.7	424.1	434.0	428.9	420.7
60°	377.3	377.5	381.1	375.3	374.2
62.5°	331.2	332.9	333.7	326.5	338.1
65°	284.4	280.6	291.6	280.5	282.4
67.5°	241.2	243.1	242.1	235.1	237.8
70°	197.5	199.9	198.1	190.2	192.6
72.5°	157.4	154.5	156.4	146.4	151.0
75°	118.3	115.9	118.1	109.7	113.5
77.5°	80.6	82.5	81.1	76.7	79.3
80°	53.2	51.7	51.7	49.2	49.7
82.5°	31.0	29.6	29.1	28.3	29.6
85°	14.5	14.1	14.4	14.0	13.4
87.5°	5.2	5.4	5.4	5.1	4.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)