

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: P590904

Luminaire Tested: FSR-24-2-LD4-4STD-35-UNV-80-87-EDD

Issue Date: 12/8/2021

**Test Information**

Test Method: LM-79-2019  
Report Number: P590904  
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-LD4-4STD-35-UNV-80-87-EDD  
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRONM  
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS  
Light Source: -  
Ballast/Driver: -

**Summary**

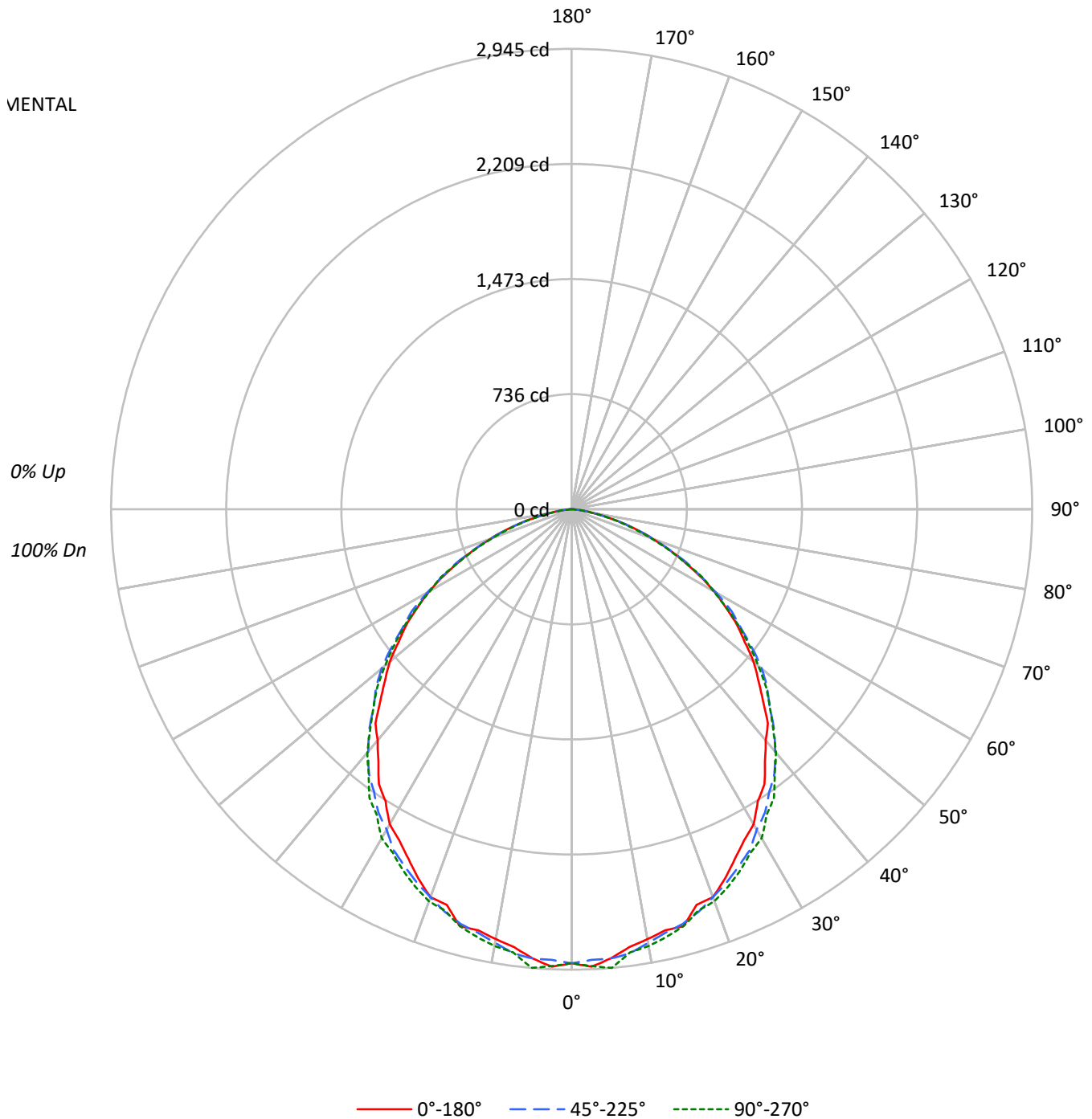
Lumens per Lamp: N/A  
Luminaire Lumens: 7318.0 lumens  
Efficiency: N/A  
Efficacy: 109.9 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 66.6  
Input Voltage (V):  
Input Current (Ain): NR  
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°	7814	7814	7814
5°	7788	7791	7955
10°	7630	7696	7751
15°	7690	7648	7691
20°	7560	7560	7641
25°	7328	7488	7570
30°	7227	7354	7550
35°	7057	7242	7404
40°	6782	7109	7141
45°	6577	6811	6821
50°	6361	6648	6521
55°	6061	6179	6135
60°	5668	5724	5621
65°	5054	5182	5018
70°	4336	4351	4230
75°	3434	3426	3294
80°	2301	2236	2149
85°	1250	1238	1158

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 6987 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	273.1	3.7
10°-20°	774.1	10.6
20°-30°	1159.7	15.8
30°-40°	1374.5	18.8
40°-50°	1377.1	18.8
50°-60°	1168.9	16.0
60°-70°	788.1	10.8
70°-80°	346.3	4.7
80°-90°	56.3	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°	2206.9	30.2
0°-40°	3581.4	48.9
0°-60°	6127.4	83.7
0°-90°	7318.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7318.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2904	2904	2904	2904	2904	
5°	2883	2876	2884	2876	2945	272
15°	2760	2728	2745	2760	2761	769
25°	2468	2482	2522	2555	2550	1141
35°	2148	2154	2204	2255	2254	1334
45°	1728	1760	1790	1836	1792	1337
55°	1292	1283	1317	1308	1308	1149
65°	794	783	814	783	788	789
75°	330	324	330	306	317	354
85°	40	39	40	39	38	59
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2903.6	2903.6	2903.6	2903.6	2903.6
2.5°	2928.7	2906.6	2886.0	2910.0	2924.6
5°	2883.0	2876.2	2884.1	2875.5	2944.8
7.5°	2823.7	2849.6	2864.6	2855.2	2859.4
10°	2792.3	2783.3	2816.6	2839.9	2836.5
12.5°	2758.5	2772.0	2773.9	2799.0	2801.2
15°	2760.4	2728.5	2745.4	2759.6	2760.8
17.5°	2653.2	2687.7	2699.3	2731.9	2691.4
20°	2640.0	2614.9	2640.0	2673.4	2668.2
22.5°	2559.4	2531.3	2585.3	2614.9	2613.1
25°	2468.0	2481.5	2521.9	2554.9	2549.7
27.5°	2387.7	2403.5	2461.2	2506.6	2477.3
30°	2325.9	2318.0	2366.7	2407.2	2429.7
32.5°	2215.3	2243.8	2300.8	2340.9	2319.5
35°	2148.2	2154.5	2204.4	2255.4	2253.9
37.5°	2030.8	2060.4	2130.6	2144.8	2131.7
40°	1930.7	1960.4	2023.7	2039.1	2032.7
42.5°	1856.9	1862.1	1916.5	1934.1	1906.0
45°	1728.3	1760.5	1789.8	1835.9	1792.4
47.5°	1618.8	1633.8	1696.8	1709.2	1686.3
50°	1519.5	1524.7	1588.1	1572.7	1557.7
52.5°	1394.6	1416.7	1452.4	1449.4	1431.7
55°	1291.9	1283.3	1317.0	1308.0	1307.6
57.5°	1168.6	1183.6	1211.3	1197.1	1174.2
60°	1053.1	1053.5	1063.6	1047.5	1044.5
62.5°	924.5	929.0	931.3	911.4	943.6
65°	793.7	783.2	813.9	782.8	788.0
67.5°	673.3	678.6	675.6	656.1	663.6
70°	551.1	557.9	553.0	530.9	537.6
72.5°	439.4	431.1	436.4	408.6	421.4
75°	330.3	323.5	329.5	306.3	316.8
77.5°	224.9	230.2	226.4	214.1	221.2
80°	148.5	144.3	144.3	137.2	138.7
82.5°	86.6	82.5	81.4	79.1	82.5
85°	40.5	39.4	40.1	39.0	37.5
87.5°	14.6	15.0	15.0	14.2	13.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)