

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: P590712

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

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590712
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-LD4-4HI-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

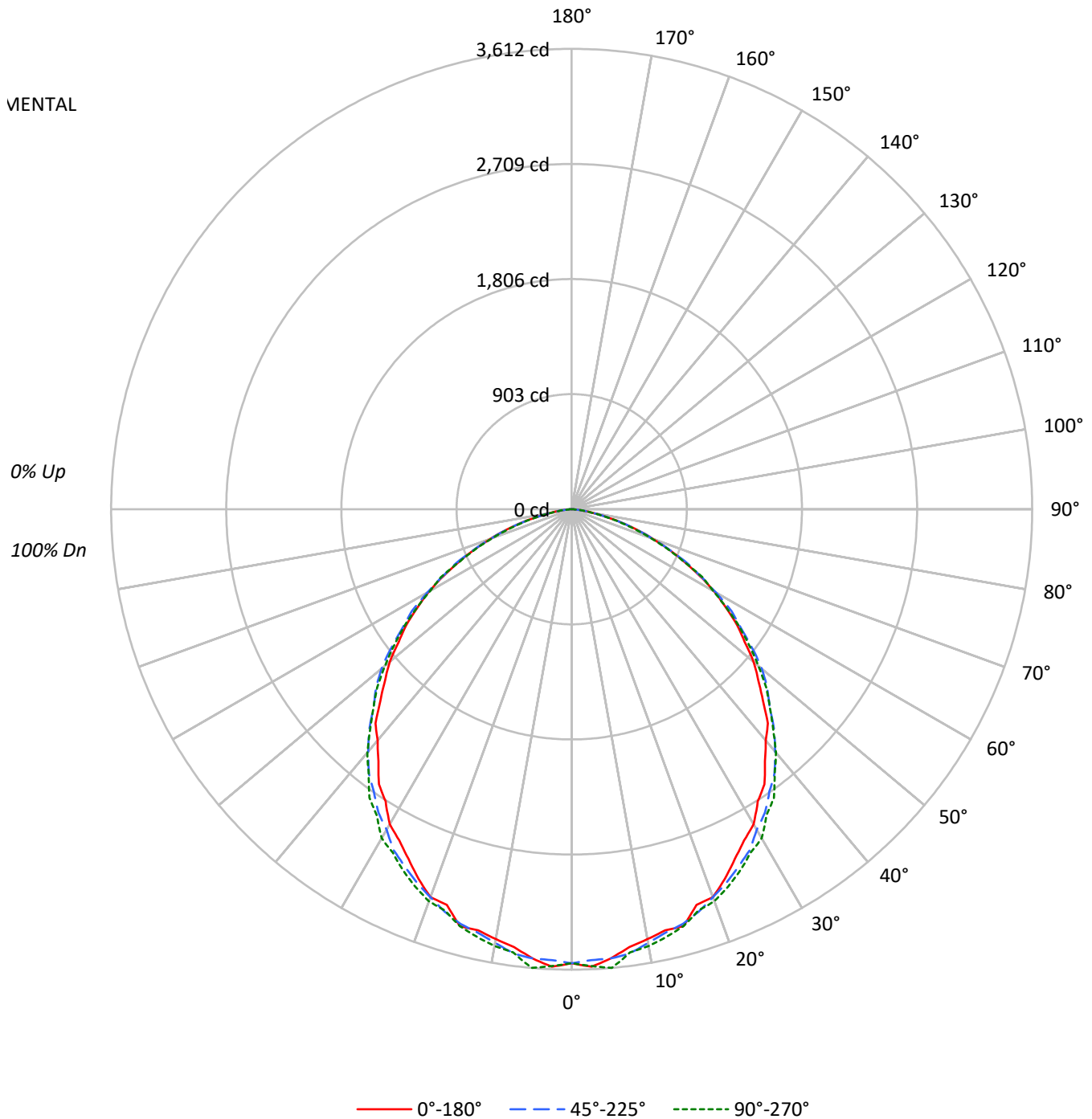
Lumens per Lamp: N/A
Luminaire Lumens: 8976.0 lumens
Efficiency: N/A
Efficacy: 103.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 86.4
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	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°	9584	9584	9584
5°	9552	9556	9757
10°	9359	9440	9507
15°	9433	9381	9434
20°	9273	9273	9372
25°	8988	9185	9286
30°	8864	9020	9260
35°	8656	8883	9082
40°	8319	8720	8758
45°	8068	8354	8367
50°	7802	8155	7999
55°	7434	7579	7525
60°	6952	7021	6895
65°	6199	6357	6155
70°	5319	5337	5188
75°	4212	4203	4040
80°	2822	2743	2636
85°	1535	1519	1420

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8569 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	335.0	3.7
10°-20°	949.5	10.6
20°-30°	1422.5	15.8
30°-40°	1685.9	18.8
40°-50°	1689.0	18.8
50°-60°	1433.7	16.0
60°-70°	966.6	10.8
70°-80°	424.7	4.7
80°-90°	69.0	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°	2706.9	30.2
0°-40°	4392.9	48.9
0°-60°	7515.6	83.7
0°-90°	8976.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8976.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3562	3562	3562	3562	3562	
5°	3536	3528	3538	3527	3612	333
15°	3386	3347	3367	3385	3386	943
25°	3027	3044	3093	3134	3127	1399
35°	2635	2643	2704	2766	2764	1636
45°	2120	2159	2195	2252	2198	1640
55°	1585	1574	1615	1604	1604	1410
65°	974	961	998	960	967	968
75°	405	397	404	376	389	434
85°	50	48	49	48	46	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3561.5	3561.5	3561.5	3561.5	3561.5
2.5°	3592.3	3565.1	3539.8	3569.3	3587.2
5°	3536.2	3527.9	3537.5	3527.0	3612.0
7.5°	3463.5	3495.2	3513.6	3502.1	3507.2
10°	3424.9	3413.8	3454.8	3483.3	3479.1
12.5°	3383.5	3400.0	3402.3	3433.2	3435.9
15°	3385.8	3346.7	3367.4	3384.9	3386.3
17.5°	3254.3	3296.6	3310.8	3350.8	3301.2
20°	3238.2	3207.4	3238.2	3279.1	3272.7
22.5°	3139.3	3104.8	3171.0	3207.4	3205.1
25°	3027.1	3043.7	3093.3	3133.8	3127.4
27.5°	2928.7	2948.0	3018.8	3074.5	3038.6
30°	2852.8	2843.2	2903.0	2952.6	2980.2
32.5°	2717.2	2752.1	2822.0	2871.2	2845.0
35°	2634.9	2642.7	2703.9	2766.4	2764.5
37.5°	2490.9	2527.3	2613.3	2630.7	2614.6
40°	2368.2	2404.5	2482.2	2501.1	2493.2
42.5°	2277.6	2284.0	2350.7	2372.3	2337.8
45°	2119.9	2159.4	2195.3	2251.8	2198.5
47.5°	1985.6	2004.0	2081.2	2096.4	2068.4
50°	1863.7	1870.2	1947.9	1929.0	1910.6
52.5°	1710.6	1737.7	1781.4	1777.7	1756.1
55°	1584.6	1574.0	1615.4	1604.4	1603.9
57.5°	1433.3	1451.7	1485.7	1468.3	1440.2
60°	1291.7	1292.1	1304.6	1284.8	1281.1
62.5°	1134.0	1139.5	1142.2	1117.9	1157.4
65°	973.5	960.6	998.3	960.1	966.6
67.5°	825.9	832.3	828.6	804.7	813.9
70°	676.0	684.2	678.3	651.1	659.4
72.5°	538.9	528.8	535.3	501.2	516.9
75°	405.1	396.8	404.2	375.7	388.6
77.5°	275.9	282.3	277.7	262.6	271.3
80°	182.1	177.0	177.0	168.3	170.1
82.5°	106.2	101.2	99.8	97.0	101.2
85°	49.7	48.3	49.2	47.8	46.0
87.5°	17.9	18.4	18.4	17.5	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)