

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: P590802

Luminaire Tested: FSR-24-2-LD4-4HI-50-UNV-93-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590802
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-50-UNV-93-94-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

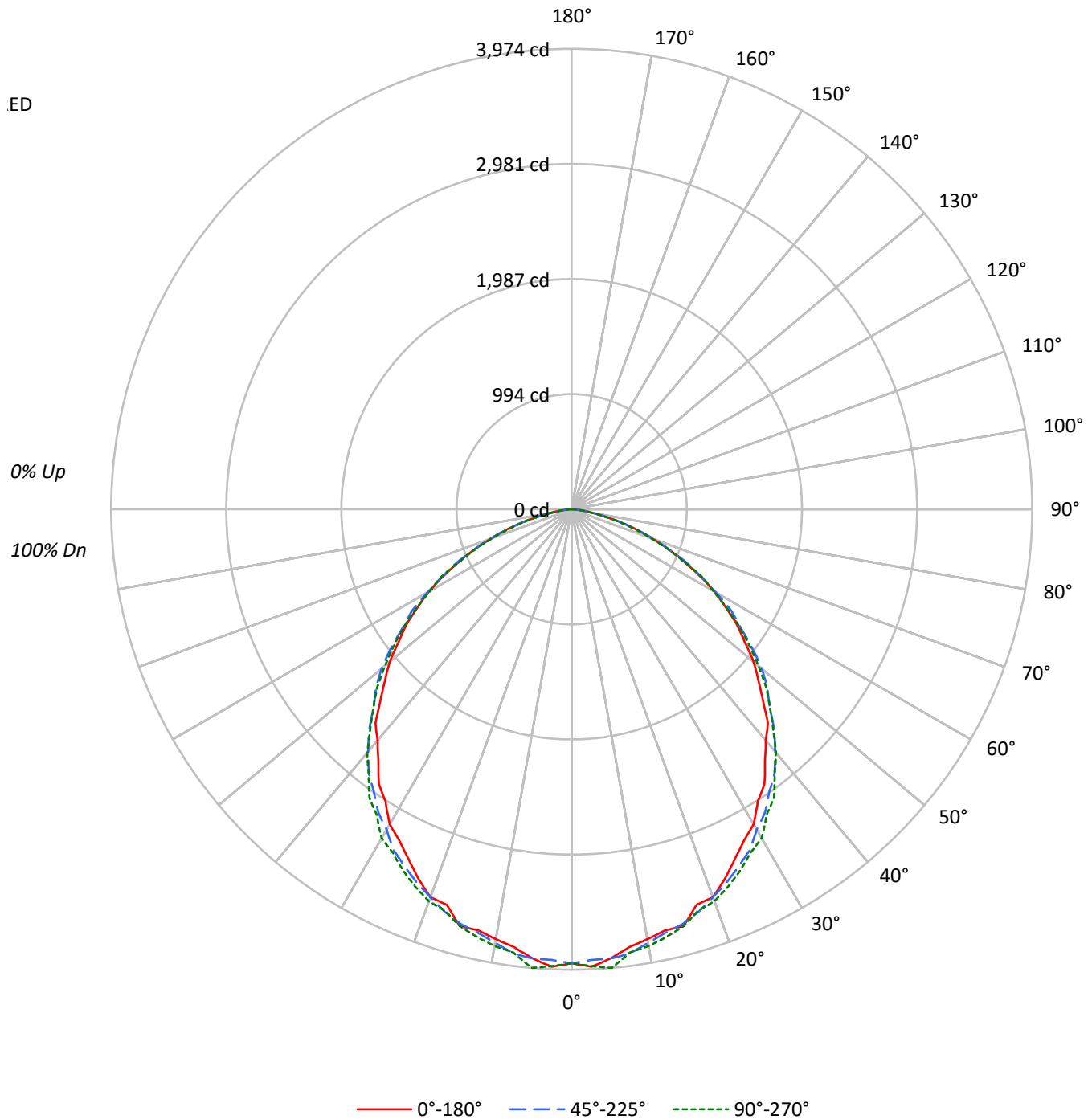
Lumens per Lamp: N/A
Luminaire Lumens: 9875.0 lumens
Efficiency: N/A
Efficacy: 114.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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				
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°	10544	10544	10544
5°	10509	10513	10734
10°	10296	10386	10459
15°	10377	10321	10379
20°	10202	10202	10310
25°	9888	10105	10216
30°	9752	9924	10188
35°	9523	9772	9991
40°	9152	9593	9636
45°	8875	9191	9205
50°	8584	8971	8800
55°	8179	8338	8279
60°	7648	7724	7585
65°	6819	6993	6771
70°	5851	5871	5708
75°	4634	4624	4445
80°	3104	3019	2901
85°	1686	1670	1562

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 9428 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	368.6	3.7
10°-20°	1044.5	10.6
20°-30°	1564.9	15.8
30°-40°	1854.8	18.8
40°-50°	1858.2	18.8
50°-60°	1577.3	16.0
60°-70°	1063.4	10.8
70°-80°	467.3	4.7
80°-90°	75.9	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°	2978.1	30.2
0°-40°	4832.8	48.9
0°-60°	8268.4	83.7
0°-90°	9875.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9875.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3918	3918	3918	3918	3918	
5°	3890	3881	3892	3880	3974	367
15°	3725	3682	3705	3724	3725	1038
25°	3330	3348	3403	3448	3441	1540
35°	2899	2907	2975	3044	3041	1800
45°	2332	2376	2415	2477	2419	1804
55°	1743	1732	1777	1765	1765	1551
65°	1071	1057	1098	1056	1063	1065
75°	446	437	445	413	428	478
85°	55	53	54	53	51	79
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3918.2	3918.2	3918.2	3918.2	3918.2
2.5°	3952.0	3922.2	3894.4	3926.8	3946.5
5°	3890.3	3881.2	3891.8	3880.2	3973.8
7.5°	3810.4	3845.3	3865.5	3852.9	3858.5
10°	3767.9	3755.8	3800.8	3832.1	3827.6
12.5°	3722.4	3740.6	3743.1	3777.0	3780.0
15°	3724.9	3681.9	3704.7	3723.9	3725.4
17.5°	3580.2	3626.8	3642.4	3686.5	3631.8
20°	3562.5	3528.6	3562.5	3607.5	3600.4
22.5°	3453.7	3415.8	3488.6	3528.6	3526.1
25°	3330.3	3348.5	3403.2	3447.7	3440.6
27.5°	3222.0	3243.3	3321.2	3382.4	3342.9
30°	3138.6	3127.9	3193.7	3248.3	3278.7
32.5°	2989.3	3027.8	3104.7	3158.8	3130.0
35°	2898.8	2907.4	2974.7	3043.5	3041.4
37.5°	2740.4	2780.4	2875.0	2894.2	2876.5
40°	2605.4	2645.3	2730.8	2751.6	2743.0
42.5°	2505.7	2512.8	2586.1	2609.9	2572.0
45°	2332.2	2375.7	2415.1	2477.4	2418.7
47.5°	2184.5	2204.7	2289.7	2306.4	2275.5
50°	2050.4	2057.5	2143.0	2122.2	2102.0
52.5°	1881.9	1911.8	1959.8	1955.8	1932.0
55°	1743.3	1731.7	1777.2	1765.1	1764.6
57.5°	1576.9	1597.1	1634.5	1615.3	1584.5
60°	1421.1	1421.6	1435.2	1413.5	1409.4
62.5°	1247.5	1253.6	1256.6	1229.8	1273.3
65°	1071.0	1056.8	1098.3	1056.3	1063.4
67.5°	908.6	915.7	911.6	885.3	895.4
70°	743.7	752.8	746.2	716.3	725.5
72.5°	592.9	581.8	588.9	551.4	568.6
75°	445.7	436.6	444.7	413.3	427.5
77.5°	303.5	310.6	305.6	288.9	298.5
80°	200.3	194.8	194.8	185.2	187.2
82.5°	116.9	111.3	109.8	106.7	111.3
85°	54.6	53.1	54.1	52.6	50.6
87.5°	19.7	20.2	20.2	19.2	18.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)