

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: P590710

Luminaire Tested: FSR-24-2-LD4-4HI-35-UNV-80-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590710
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-80-85-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

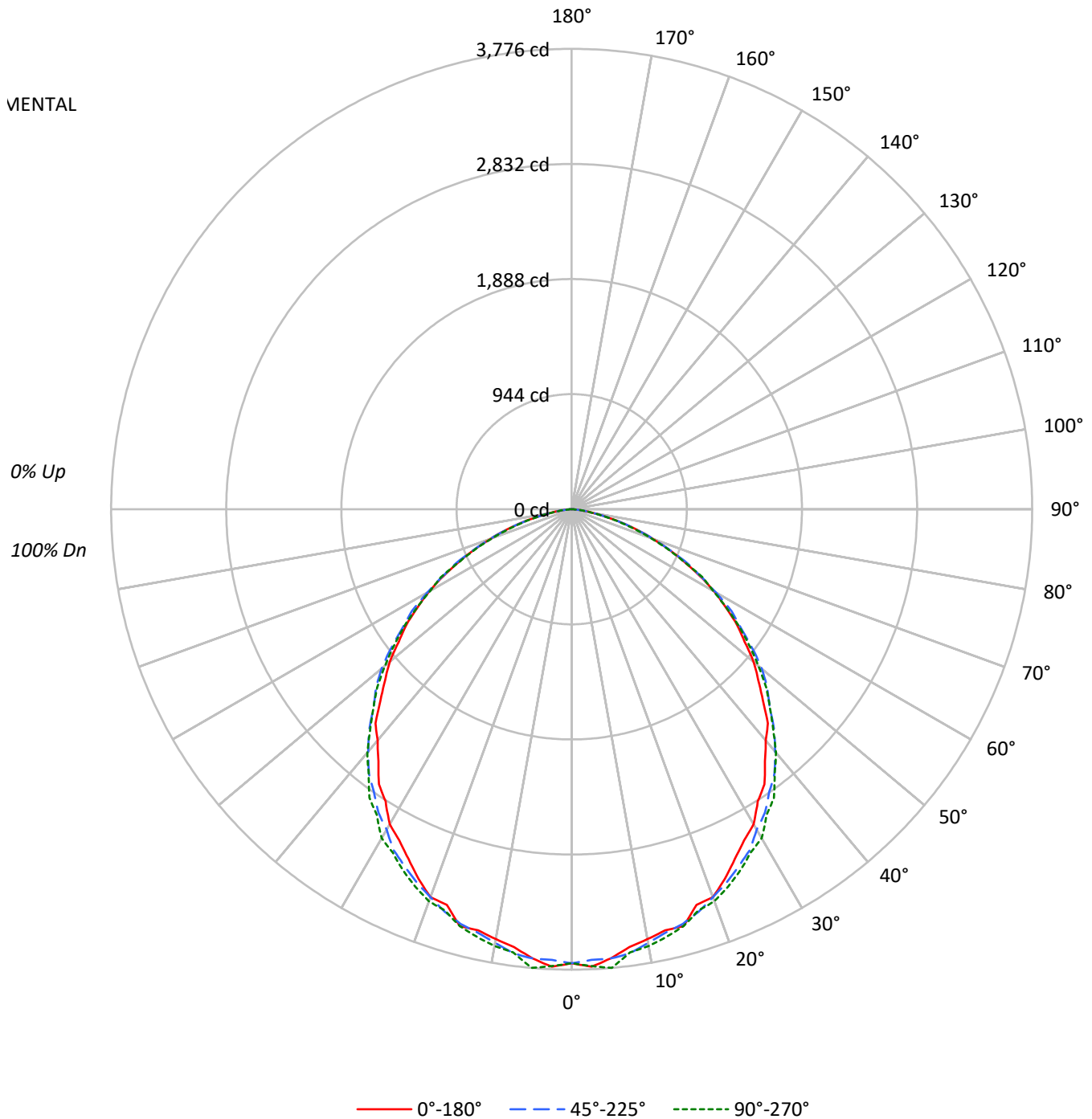
Lumens per Lamp: N/A
Luminaire Lumens: 9383.0 lumens
Efficiency: N/A
Efficacy: 108.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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									
RC	80									70									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°	10018	10018	10018
5°	9985	9989	10199
10°	9783	9868	9938
15°	9860	9807	9862
20°	9694	9694	9797
25°	9396	9601	9707
30°	9267	9429	9680
35°	9048	9285	9494
40°	8696	9115	9155
45°	8433	8733	8746
50°	8156	8524	8362
55°	7772	7923	7866
60°	7267	7339	7208
65°	6479	6645	6434
70°	5559	5578	5423
75°	4403	4393	4223
80°	2951	2868	2757
85°	1602	1587	1485

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8958 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	350.2	3.7
10°-20°	992.5	10.6
20°-30°	1487.0	15.8
30°-40°	1762.4	18.8
40°-50°	1765.6	18.8
50°-60°	1498.7	16.0
60°-70°	1010.4	10.8
70°-80°	444.0	4.7
80°-90°	72.2	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°	2829.7	30.2
0°-40°	4592.1	48.9
0°-60°	7856.4	83.7
0°-90°	9383.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9383.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3723	3723	3723	3723	3723	
5°	3696	3688	3698	3687	3776	348
15°	3539	3498	3520	3538	3540	986
25°	3164	3182	3234	3276	3269	1463
35°	2754	2762	2826	2892	2890	1710
45°	2216	2257	2295	2354	2298	1714
55°	1656	1645	1689	1677	1677	1474
65°	1018	1004	1044	1004	1010	1012
75°	424	415	422	393	406	454
85°	52	50	51	50	48	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3722.9	3722.9	3722.9	3722.9	3722.9
2.5°	3755.1	3726.8	3700.3	3731.1	3749.9
5°	3696.5	3687.8	3697.9	3686.9	3775.8
7.5°	3620.6	3653.7	3672.9	3660.9	3666.2
10°	3580.2	3568.6	3611.4	3641.2	3636.9
12.5°	3536.9	3554.2	3556.6	3588.8	3591.7
15°	3539.3	3498.5	3520.1	3538.4	3539.8
17.5°	3401.8	3446.1	3461.0	3502.8	3450.9
20°	3385.0	3352.8	3385.0	3427.8	3421.1
22.5°	3281.7	3245.6	3314.8	3352.8	3350.4
25°	3164.4	3181.7	3233.6	3275.9	3269.2
27.5°	3061.5	3081.7	3155.7	3213.9	3176.4
30°	2982.2	2972.1	3034.6	3086.5	3115.3
32.5°	2840.4	2876.9	2950.0	3001.4	2974.0
35°	2754.3	2762.5	2826.5	2891.8	2889.9
37.5°	2603.9	2641.9	2731.8	2750.0	2733.2
40°	2475.5	2513.5	2594.8	2614.5	2606.3
42.5°	2380.9	2387.6	2457.3	2479.9	2443.8
45°	2216.0	2257.3	2294.8	2353.9	2298.2
47.5°	2075.6	2094.8	2175.6	2191.5	2162.1
50°	1948.2	1955.0	2036.2	2016.5	1997.3
52.5°	1788.2	1816.5	1862.2	1858.3	1835.8
55°	1656.5	1645.4	1688.7	1677.1	1676.6
57.5°	1498.3	1517.5	1553.1	1534.8	1505.5
60°	1350.3	1350.7	1363.7	1343.0	1339.2
62.5°	1185.4	1191.1	1194.0	1168.6	1209.9
65°	1017.6	1004.2	1043.6	1003.7	1010.4
67.5°	863.3	870.0	866.2	841.2	850.8
70°	706.6	715.3	709.0	680.7	689.3
72.5°	563.4	552.8	559.5	524.0	540.3
75°	423.5	414.8	422.5	392.7	406.2
77.5°	288.4	295.1	290.3	274.5	283.6
80°	190.4	185.1	185.1	175.9	177.9
82.5°	111.0	105.8	104.3	101.4	105.8
85°	51.9	50.5	51.4	50.0	48.1
87.5°	18.7	19.2	19.2	18.3	17.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)