

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: P590742

Luminaire Tested: FSR-24-2-LD4-4HI-40-UNV-80-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590742
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9477.0 lumens
Efficiency: N/A
Efficacy: 109.7 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

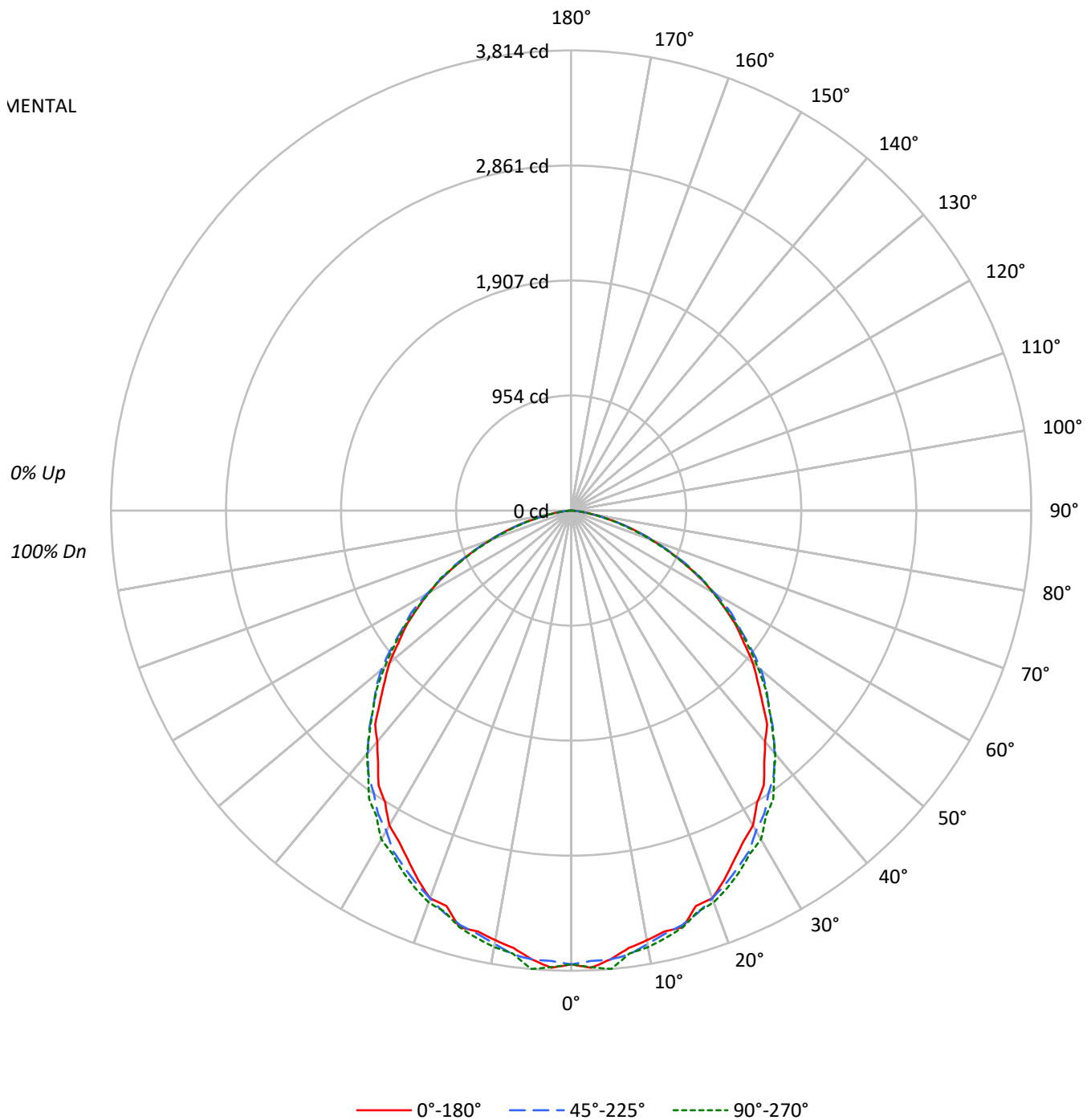
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10119	10119	10119
5°	10085	10089	10302
10°	9881	9967	10037
15°	9959	9905	9960
20°	9791	9791	9895
25°	9490	9697	9804
30°	9359	9524	9777
35°	9139	9378	9589
40°	8783	9206	9247
45°	8518	8821	8834
50°	8238	8610	8445
55°	7849	8002	7945
60°	7340	7413	7280
65°	6544	6711	6498
70°	5615	5634	5478
75°	4447	4438	4266
80°	2980	2896	2783
85°	1618	1602	1501

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 9048 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	353.7	3.7
10°-20°	1002.4	10.6
20°-30°	1501.9	15.8
30°-40°	1780.0	18.8
40°-50°	1783.3	18.8
50°-60°	1513.7	16.0
60°-70°	1020.6	10.8
70°-80°	448.4	4.7
80°-90°	72.9	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°	2858.0	30.2
0°-40°	4638.1	48.9
0°-60°	7935.1	83.7
0°-90°	9477.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9477.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3760	3760	3760	3760	3760	
5°	3734	3725	3735	3724	3814	352
15°	3575	3534	3555	3574	3575	996
25°	3196	3214	3266	3309	3302	1478
35°	2782	2790	2855	2921	2919	1727
45°	2238	2280	2318	2378	2321	1731
55°	1673	1662	1706	1694	1693	1488
65°	1028	1014	1054	1014	1020	1022
75°	428	419	427	397	410	458
85°	52	51	52	50	49	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3760.2	3760.2	3760.2	3760.2	3760.2
2.5°	3792.8	3764.1	3737.4	3768.5	3787.4
5°	3733.5	3724.8	3735.0	3723.8	3813.6
7.5°	3656.8	3690.3	3709.7	3697.6	3702.9
10°	3616.0	3604.4	3647.6	3677.7	3673.3
12.5°	3572.3	3589.8	3592.2	3624.8	3627.7
15°	3574.8	3533.5	3555.4	3573.8	3575.3
17.5°	3435.9	3480.6	3495.6	3537.9	3485.4
20°	3418.9	3386.4	3418.9	3462.1	3455.3
22.5°	3314.5	3278.1	3348.0	3386.4	3384.0
25°	3196.1	3213.6	3266.0	3308.7	3301.9
27.5°	3092.2	3112.6	3187.3	3246.1	3208.2
30°	3012.1	3001.9	3065.0	3117.4	3146.6
32.5°	2868.8	2905.7	2979.5	3031.5	3003.8
35°	2781.9	2790.2	2854.8	2920.8	2918.9
37.5°	2630.0	2668.3	2759.1	2777.6	2760.6
40°	2500.3	2538.7	2620.8	2640.7	2632.4
42.5°	2404.7	2411.5	2481.9	2504.7	2468.3
45°	2238.2	2279.9	2317.8	2377.5	2321.2
47.5°	2096.4	2115.8	2197.4	2213.4	2183.8
50°	1967.8	1974.5	2056.6	2036.7	2017.3
52.5°	1806.1	1834.7	1880.8	1877.0	1854.1
55°	1673.0	1661.9	1705.6	1693.9	1693.4
57.5°	1513.3	1532.7	1568.7	1550.2	1520.6
60°	1363.8	1364.3	1377.4	1356.5	1352.6
62.5°	1197.3	1203.1	1206.0	1180.3	1222.0
65°	1027.8	1014.2	1054.0	1013.7	1020.5
67.5°	872.0	878.8	874.9	849.6	859.3
70°	713.7	722.4	716.1	687.5	696.2
72.5°	569.0	558.3	565.1	529.2	545.7
75°	427.7	419.0	426.8	396.7	410.3
77.5°	291.3	298.1	293.2	277.2	286.4
80°	192.3	186.9	186.9	177.7	179.6
82.5°	112.2	106.8	105.4	102.4	106.8
85°	52.4	51.0	51.9	50.5	48.6
87.5°	18.9	19.4	19.4	18.4	17.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)