

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: P590715

Luminaire Tested: FSR-24-2-LD4-4HI-35-UNV-80-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590715
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-80-96-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9489.0 lumens
Efficiency: N/A
Efficacy: 109.8 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

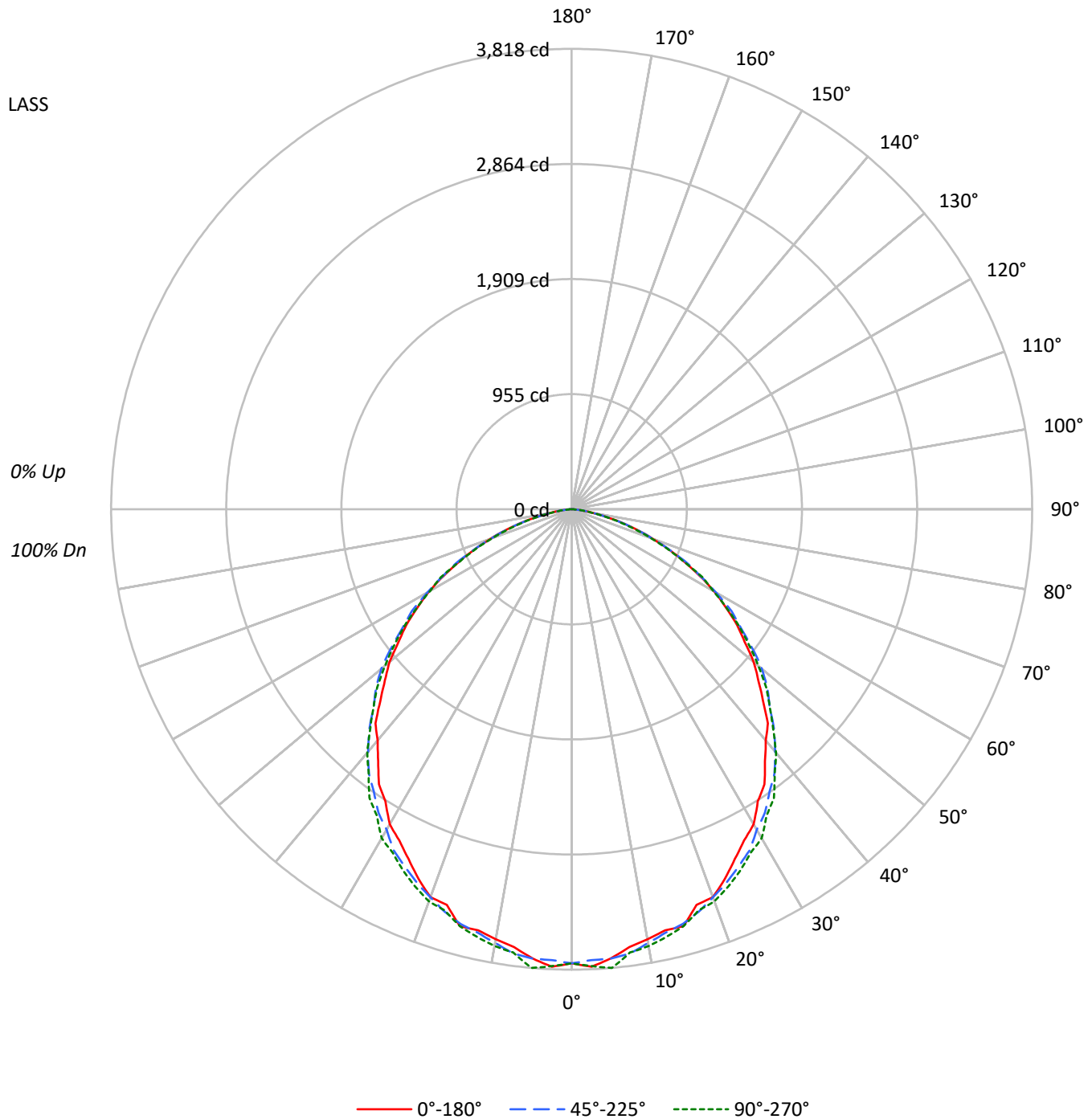
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	10132	10132	10132
5°	10098	10102	10315
10°	9893	9980	10050
15°	9972	9918	9973
20°	9803	9803	9907
25°	9502	9709	9816
30°	9371	9536	9789
35°	9151	9390	9601
40°	8794	9218	9259
45°	8528	8832	8845
50°	8248	8621	8456
55°	7859	8012	7955
60°	7349	7422	7289
65°	6553	6720	6506
70°	5622	5641	5485
75°	4453	4443	4271
80°	2983	2901	2788
85°	1621	1606	1501

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 9059 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	354.2	3.7
10°-20°	1003.7	10.6
20°-30°	1503.8	15.8
30°-40°	1782.3	18.8
40°-50°	1785.6	18.8
50°-60°	1515.7	16.0
60°-70°	1021.9	10.8
70°-80°	449.0	4.7
80°-90°	73.0	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°	2861.7	30.2
0°-40°	4643.9	48.9
0°-60°	7945.2	83.7
0°-90°	9489.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9489.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3765	3765	3765	3765	3765	
5°	3738	3730	3740	3728	3818	352
15°	3579	3538	3560	3578	3580	997
25°	3200	3218	3270	3313	3306	1479
35°	2786	2794	2858	2924	2923	1729
45°	2241	2283	2321	2380	2324	1734
55°	1675	1664	1708	1696	1696	1490
65°	1029	1016	1055	1015	1022	1024
75°	428	420	427	397	411	459
85°	52	51	52	51	49	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3765.0	3765.0	3765.0	3765.0	3765.0
2.5°	3797.6	3768.9	3742.1	3773.3	3792.2
5°	3738.3	3729.5	3739.7	3728.5	3818.5
7.5°	3661.5	3695.0	3714.4	3702.3	3707.6
10°	3620.6	3609.0	3652.2	3682.4	3678.0
12.5°	3576.9	3594.4	3596.8	3629.4	3632.3
15°	3579.3	3538.0	3559.9	3578.3	3579.8
17.5°	3440.3	3485.0	3500.1	3542.4	3489.9
20°	3423.3	3390.7	3423.3	3466.5	3459.7
22.5°	3318.7	3282.3	3352.3	3390.7	3388.3
25°	3200.1	3217.6	3270.1	3312.9	3306.1
27.5°	3096.1	3116.5	3191.4	3250.2	3212.3
30°	3015.9	3005.7	3068.9	3121.4	3150.5
32.5°	2872.5	2909.4	2983.3	3035.3	3007.6
35°	2785.5	2793.7	2858.4	2924.5	2922.6
37.5°	2633.3	2671.7	2762.6	2781.1	2764.1
40°	2503.5	2541.9	2624.1	2644.0	2635.7
42.5°	2407.7	2414.6	2485.0	2507.9	2471.4
45°	2241.0	2282.8	2320.7	2380.5	2324.1
47.5°	2099.1	2118.5	2200.2	2216.2	2186.6
50°	1970.2	1977.0	2059.2	2039.3	2019.8
52.5°	1808.4	1837.0	1883.2	1879.3	1856.5
55°	1675.2	1664.0	1707.7	1696.1	1695.6
57.5°	1515.2	1534.7	1570.7	1552.2	1522.5
60°	1365.5	1366.0	1379.1	1358.2	1354.3
62.5°	1198.8	1204.6	1207.5	1181.8	1223.6
65°	1029.1	1015.5	1055.4	1015.0	1021.8
67.5°	873.1	879.9	876.0	850.7	860.4
70°	714.6	723.3	717.0	688.3	697.1
72.5°	569.7	559.0	565.8	529.9	546.4
75°	428.3	419.5	427.3	397.2	410.8
77.5°	291.7	298.5	293.6	277.6	286.8
80°	192.5	187.2	187.2	177.9	179.9
82.5°	112.3	106.9	105.5	102.6	106.9
85°	52.5	51.0	52.0	50.6	48.6
87.5°	19.0	19.4	19.4	18.5	17.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)