

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: P590778

Luminaire Tested: FSR-24-2-LD4-4HI-50-UNV-80-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590778
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-80-94-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9856.0 lumens
Efficiency: N/A
Efficacy: 114.1 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

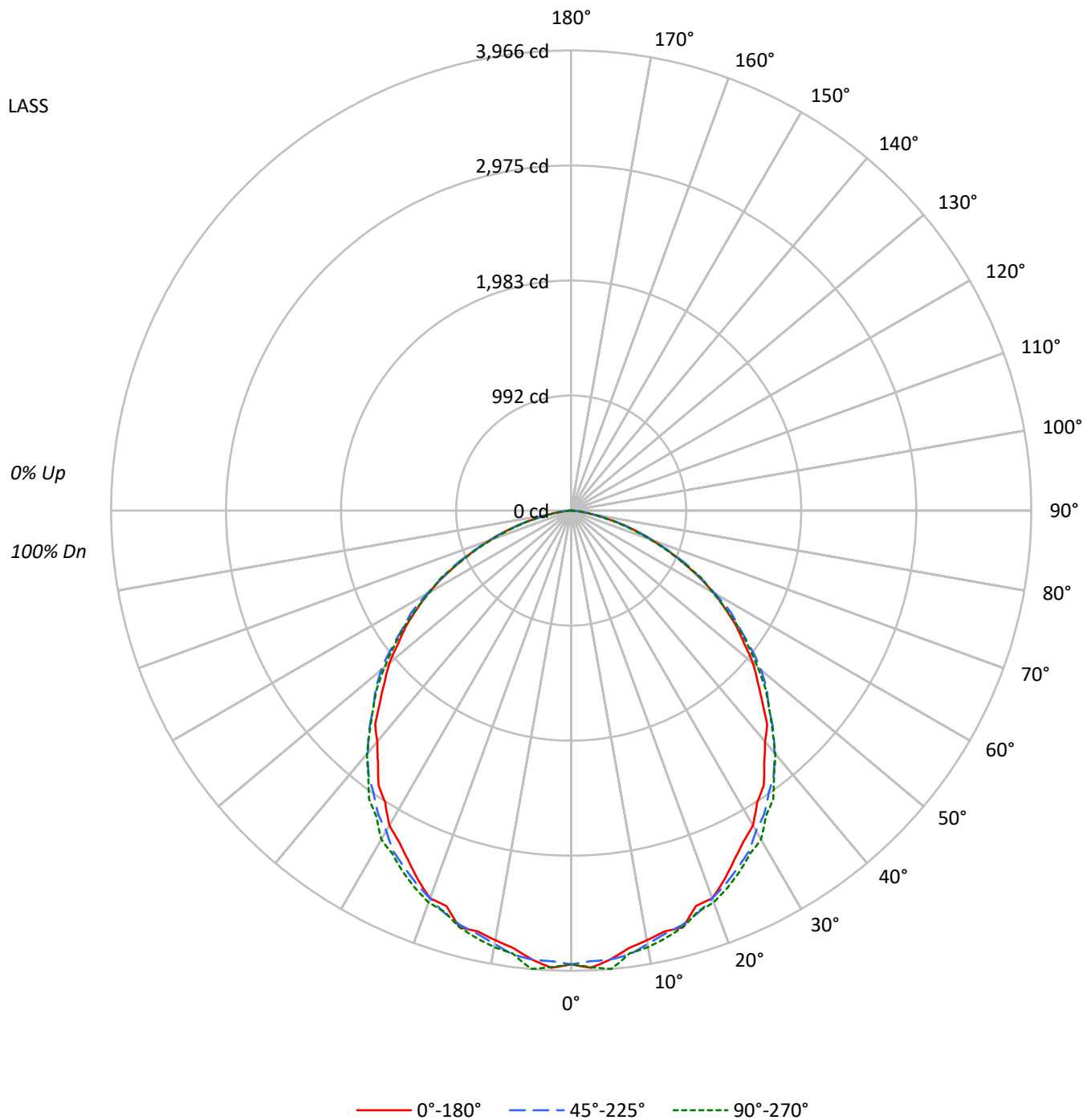
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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°	10523	10523	10523
5°	10488	10493	10714
10°	10276	10366	10439
15°	10357	10301	10359
20°	10182	10182	10291
25°	9869	10085	10196
30°	9734	9905	10168
35°	9504	9753	9972
40°	9134	9575	9617
45°	8858	9173	9187
50°	8567	8954	8783
55°	8163	8322	8263
60°	7633	7710	7571
65°	6806	6980	6758
70°	5840	5860	5697
75°	4625	4614	4436
80°	3098	3013	2895
85°	1683	1667	1559

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 9410 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	367.9	3.7
10°-20°	1042.5	10.6
20°-30°	1561.9	15.8
30°-40°	1851.2	18.8
40°-50°	1854.6	18.8
50°-60°	1574.3	16.0
60°-70°	1061.4	10.8
70°-80°	466.4	4.7
80°-90°	75.8	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°	2972.3	30.2
0°-40°	4823.5	48.9
0°-60°	8252.4	83.7
0°-90°	9856.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9856.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3911	3911	3911	3911	3911	
5°	3883	3874	3884	3873	3966	366
15°	3718	3675	3698	3717	3718	1036
25°	3324	3342	3397	3441	3434	1537
35°	2893	2902	2969	3038	3036	1796
45°	2328	2371	2410	2473	2414	1801
55°	1740	1728	1774	1762	1761	1548
65°	1069	1055	1096	1054	1061	1063
75°	445	436	444	412	427	477
85°	54	53	54	52	50	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3910.6	3910.6	3910.6	3910.6	3910.6
2.5°	3944.4	3914.7	3886.9	3919.2	3938.9
5°	3882.8	3873.8	3884.4	3872.7	3966.2
7.5°	3803.1	3837.9	3858.1	3845.5	3851.0
10°	3760.7	3748.5	3793.5	3824.8	3820.2
12.5°	3715.2	3733.4	3735.9	3769.7	3772.8
15°	3717.7	3674.8	3697.5	3716.7	3718.2
17.5°	3573.3	3619.8	3635.4	3679.4	3624.8
20°	3555.7	3521.8	3555.7	3600.6	3593.5
22.5°	3447.1	3409.2	3481.9	3521.8	3519.3
25°	3323.9	3342.1	3396.6	3441.0	3434.0
27.5°	3215.8	3237.0	3314.8	3375.9	3336.5
30°	3132.5	3121.9	3187.6	3242.1	3272.4
32.5°	2983.6	3022.0	3098.7	3152.7	3123.9
35°	2893.2	2901.8	2968.9	3037.6	3035.6
37.5°	2735.2	2775.0	2869.5	2888.7	2871.0
40°	2600.3	2640.2	2725.6	2746.3	2737.7
42.5°	2500.9	2507.9	2581.2	2604.9	2567.0
45°	2327.7	2371.1	2410.5	2472.6	2414.0
47.5°	2180.2	2200.4	2285.3	2301.9	2271.1
50°	2046.4	2053.5	2138.8	2118.1	2097.9
52.5°	1878.3	1908.1	1956.1	1952.0	1928.3
55°	1740.0	1728.3	1773.8	1761.7	1761.2
57.5°	1573.8	1594.0	1631.4	1612.2	1581.4
60°	1418.3	1418.8	1432.5	1410.7	1406.7
62.5°	1245.1	1251.2	1254.2	1227.5	1270.9
65°	1068.9	1054.8	1096.2	1054.3	1061.3
67.5°	906.8	913.9	909.9	883.6	893.7
70°	742.2	751.3	744.8	715.0	724.1
72.5°	591.8	580.7	587.7	550.4	567.5
75°	444.8	435.7	443.8	412.5	426.7
77.5°	303.0	310.0	305.0	288.3	297.9
80°	199.9	194.4	194.4	184.8	186.8
82.5°	116.6	111.1	109.6	106.5	111.1
85°	54.5	53.0	54.0	52.5	50.5
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)