

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: P563903

Luminaire Tested: FSR-24-4-LD4-4LO-40-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563903
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-4LO-40-UNV-80-97-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11251.0 lumens
Efficiency: N/A
Efficacy: 120.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

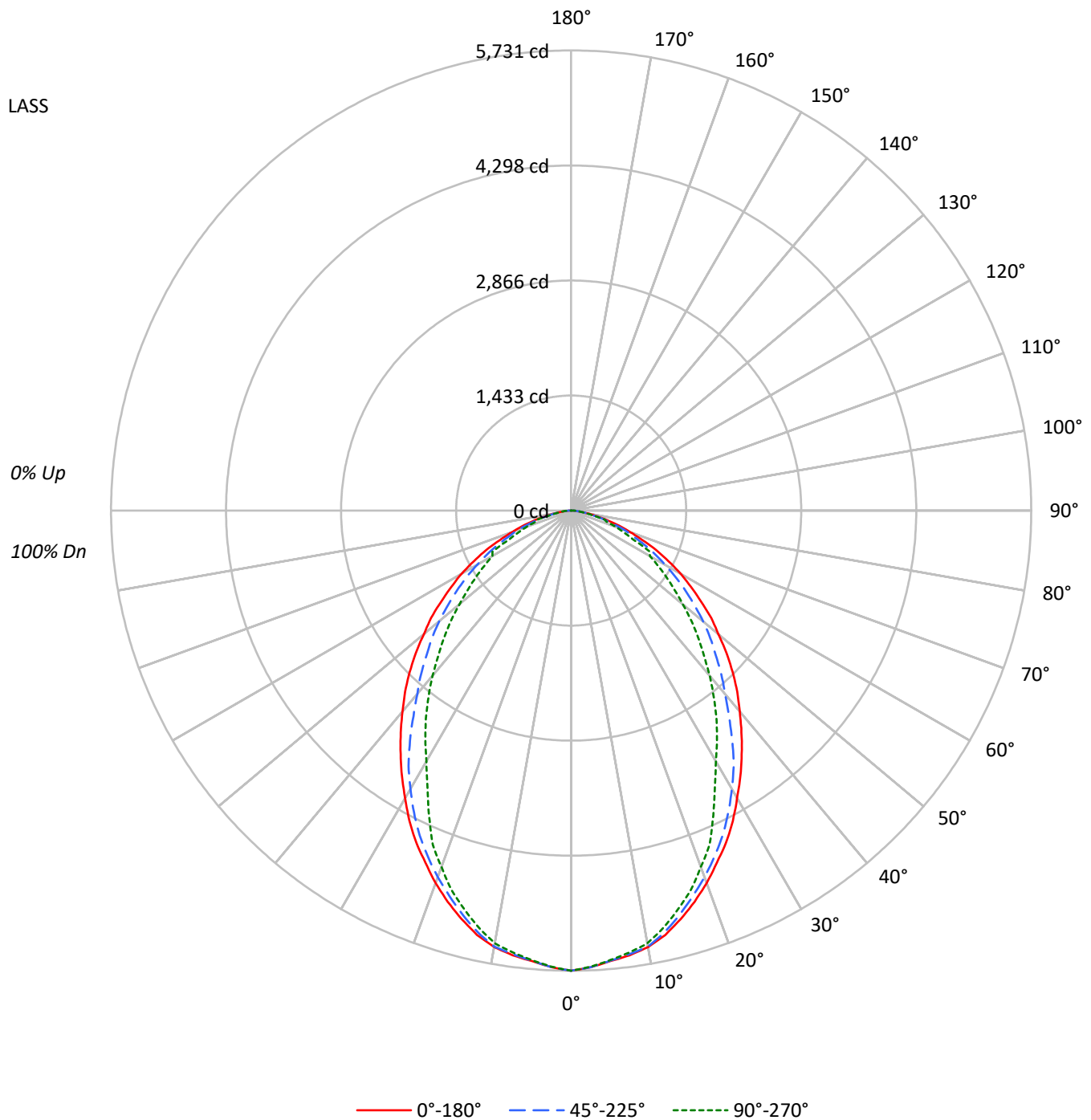
Input Watts (W): 93.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7711	7711	7711
5°	7606	7597	7589
10°	7540	7531	7477
15°	7337	7263	7162
20°	7068	6954	6764
25°	6777	6630	6217
30°	6423	6217	5600
35°	6083	5746	5180
40°	5737	5237	4713
45°	5409	4841	4261
50°	5007	4493	3800
55°	4632	4072	3404
60°	4243	3637	3049
65°	3734	3185	2700
70°	3076	2789	2293
75°	2445	2136	2239
80°	1643	1540	1437
85°	1024	1227	1433

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5409 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	533.5	4.7
10°-20°	1464.1	13.0
20°-30°	2027.0	18.0
30°-40°	2161.3	19.2
40°-50°	1971.8	17.5
50°-60°	1544.7	13.7
60°-70°	1006.8	8.9
70°-80°	446.0	4.0
80°-90°	95.8	0.9
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°	4024.6	35.8
0°-40°	6185.9	55.0
0°-60°	9702.4	86.2
0°-90°	11251.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11251.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5731	5731	5731	5731	5731	
5°	5632	5625	5625	5618	5618	535
15°	5267	5267	5214	5161	5141	1481
25°	4565	4538	4466	4307	4187	2096
35°	3704	3677	3498	3233	3154	2315
45°	2842	2783	2544	2332	2239	2189
55°	1974	1915	1736	1530	1451	1771
65°	1173	1106	1000	1020	848	1156
75°	470	437	411	391	431	504
85°	66	73	80	86	93	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5731.1	5731.1	5731.1	5731.1	5731.1
2.5°	5691.4	5691.4	5691.4	5684.7	5684.7
5°	5631.7	5625.1	5625.1	5618.5	5618.5
7.5°	5585.3	5578.7	5572.1	5565.5	5552.2
10°	5519.1	5519.1	5512.5	5479.3	5472.7
12.5°	5413.1	5406.5	5380.0	5333.6	5320.3
15°	5267.3	5267.3	5214.3	5161.3	5141.4
17.5°	5108.3	5101.7	5035.4	4982.4	4955.9
20°	4936.0	4922.8	4856.5	4770.4	4724.0
22.5°	4743.9	4743.9	4664.4	4551.8	4505.4
25°	4565.0	4538.5	4465.6	4306.6	4187.4
27.5°	4359.6	4319.9	4240.4	4015.1	3876.0
30°	4134.3	4114.5	4001.8	3710.3	3604.3
32.5°	3922.3	3889.2	3769.9	3465.2	3379.0
35°	3703.7	3677.2	3498.3	3233.3	3153.8
37.5°	3485.0	3451.9	3226.6	3014.6	2915.2
40°	3266.4	3226.6	2981.5	2789.4	2683.4
42.5°	3061.0	3008.0	2769.5	2564.1	2444.8
45°	2842.4	2782.7	2544.2	2332.2	2239.4
47.5°	2623.7	2570.7	2352.1	2133.4	2027.4
50°	2391.8	2345.4	2146.7	1928.0	1815.4
52.5°	2199.7	2126.8	1934.7	1716.0	1623.3
55°	1974.4	1914.8	1735.9	1530.5	1451.0
57.5°	1769.0	1709.4	1543.8	1351.6	1285.4
60°	1576.9	1490.8	1351.6	1186.0	1133.0
62.5°	1364.9	1298.6	1179.3	1040.2	1106.5
65°	1172.7	1106.5	1000.5	1020.3	848.1
67.5°	960.7	927.6	834.8	742.1	715.6
70°	781.8	742.1	708.9	609.6	583.0
72.5°	622.8	583.0	536.7	483.7	463.8
75°	470.4	437.3	410.8	390.9	430.7
77.5°	324.7	311.4	291.5	271.6	265.0
80°	212.0	205.4	198.8	192.1	185.5
82.5°	125.9	125.9	125.9	125.9	125.9
85°	66.3	72.9	79.5	86.1	92.8
87.5°	39.8	39.8	46.4	53.0	59.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)