

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: P563711

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563711
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-LD4-4HI-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: 18481.0 lumens
Efficiency: N/A
Efficacy: 107.0 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

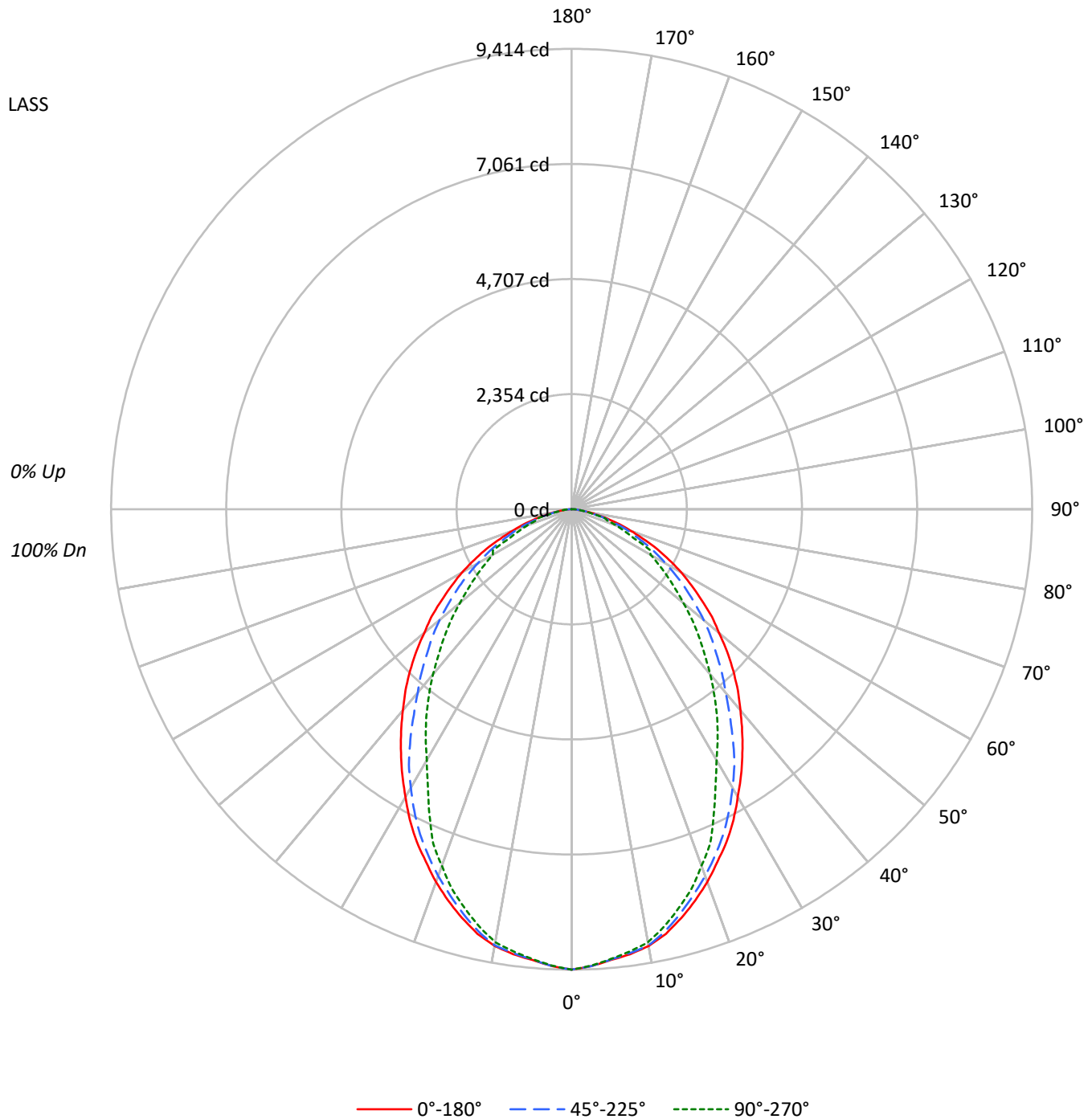
Input Watts (W): 172.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12666	12666	12666
5°	12494	12480	12465
10°	12386	12371	12282
15°	12052	11931	11764
20°	11609	11422	11111
25°	11132	10890	10211
30°	10551	10213	9198
35°	9993	9439	8509
40°	9424	8602	7742
45°	8884	7952	6999
50°	8224	7381	6242
55°	7608	6689	5591
60°	6970	5975	5008
65°	6133	5232	4435
70°	5052	4581	3768
75°	4017	3508	3677
80°	2699	2530	2361
85°	1680	2016	2353

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8884 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	876.3	4.7
10°-20°	2405.0	13.0
20°-30°	3329.5	18.0
30°-40°	3550.2	19.2
40°-50°	3238.9	17.5
50°-60°	2537.4	13.7
60°-70°	1653.7	8.9
70°-80°	732.7	4.0
80°-90°	157.3	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°	6610.8	35.8
0°-40°	10161.0	55.0
0°-60°	15937.3	86.2
0°-90°	18481.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	18481.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	9414	9414	9414	9414	9414	
5°	9251	9240	9240	9229	9229	878
15°	8652	8652	8565	8478	8445	2432
25°	7498	7455	7335	7074	6878	3443
35°	6084	6040	5746	5311	5180	3803
45°	4669	4571	4179	3831	3678	3596
55°	3243	3145	2851	2514	2383	2909
65°	1926	1818	1643	1676	1393	1898
75°	773	718	675	642	707	828
85°	109	120	131	142	152	151
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9414.0	9414.0	9414.0	9414.0	9414.0
2.5°	9348.7	9348.7	9348.7	9337.8	9337.8
5°	9250.7	9239.8	9239.8	9229.0	9229.0
7.5°	9174.5	9163.7	9152.8	9141.9	9120.1
10°	9065.7	9065.7	9054.8	9000.4	8989.5
12.5°	8891.6	8880.7	8837.2	8761.0	8739.2
15°	8652.1	8652.1	8565.1	8478.0	8445.4
17.5°	8391.0	8380.1	8271.2	8184.2	8140.6
20°	8108.0	8086.2	7977.4	7835.9	7759.7
22.5°	7792.4	7792.4	7661.8	7476.8	7400.6
25°	7498.5	7455.0	7335.3	7074.1	6878.2
27.5°	7161.2	7095.9	6965.3	6595.2	6366.7
30°	6791.1	6758.5	6573.5	6094.6	5920.5
32.5°	6442.9	6388.4	6192.5	5691.9	5550.4
35°	6083.7	6040.2	5746.3	5311.0	5180.4
37.5°	5724.6	5670.2	5300.1	4951.9	4788.6
40°	5365.4	5300.1	4897.4	4581.8	4407.7
42.5°	5028.0	4941.0	4549.2	4211.8	4015.9
45°	4668.9	4570.9	4179.2	3830.9	3678.5
47.5°	4309.8	4222.7	3863.5	3504.4	3330.3
50°	3928.8	3852.7	3526.2	3167.0	2982.0
52.5°	3613.2	3493.5	3177.9	2818.8	2666.4
55°	3243.2	3145.2	2851.4	2514.0	2383.4
57.5°	2905.8	2807.9	2535.8	2220.2	2111.3
60°	2590.2	2448.7	2220.2	1948.1	1861.0
62.5°	2241.9	2133.1	1937.2	1708.7	1817.5
65°	1926.3	1817.5	1643.4	1676.0	1393.1
67.5°	1578.1	1523.6	1371.3	1218.9	1175.4
70°	1284.2	1218.9	1164.5	1001.3	957.7
72.5°	1023.0	957.7	881.5	794.5	761.8
75°	772.7	718.3	674.8	642.1	707.4
77.5°	533.3	511.5	478.9	446.2	435.3
80°	348.3	337.4	326.5	315.6	304.7
82.5°	206.8	206.8	206.8	206.8	206.8
85°	108.8	119.7	130.6	141.5	152.4
87.5°	65.3	65.3	76.2	87.1	97.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)