

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: P562556

Luminaire Tested: FSR-24-4-LD4-2HI-40-UNV-80-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562556
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-LD4-2HI-40-UNV-80-96-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8053.0 lumens
Efficiency: N/A
Efficacy: 93.2 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

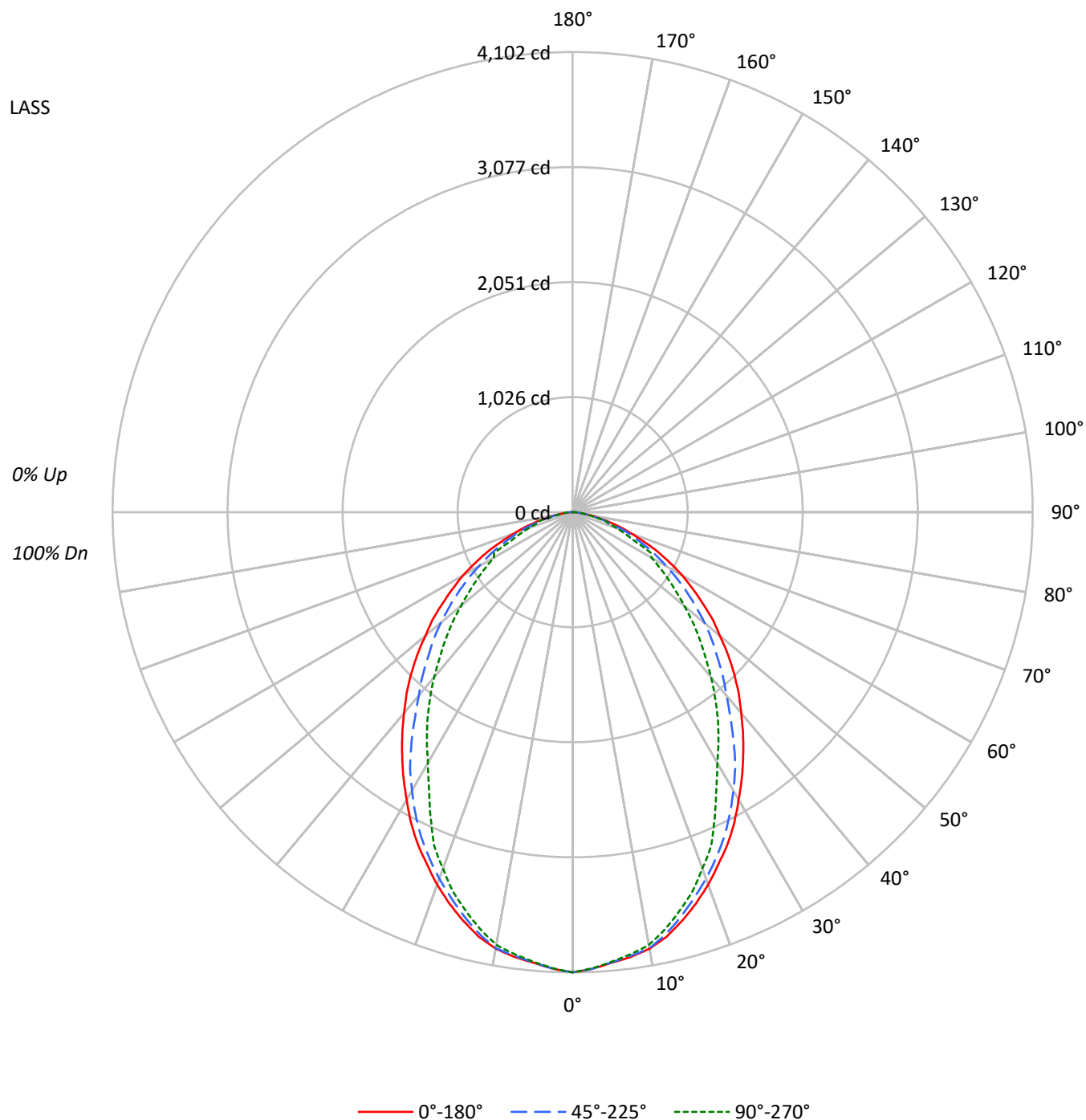
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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	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°	5519	5519	5519
5°	5444	5438	5432
10°	5397	5391	5352
15°	5252	5199	5126
20°	5059	4977	4841
25°	4851	4745	4449
30°	4598	4450	4008
35°	4354	4113	3708
40°	4106	3748	3373
45°	3871	3465	3050
50°	3584	3216	2720
55°	3315	2915	2436
60°	3037	2603	2182
65°	2672	2280	1933
70°	2201	1996	1642
75°	1750	1528	1602
80°	1176	1103	1029
85°	732	878	1025

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 3871 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	381.8	4.7
10°-20°	1048.0	13.0
20°-30°	1450.8	18.0
30°-40°	1547.0	19.2
40°-50°	1411.3	17.5
50°-60°	1105.7	13.7
60°-70°	720.6	8.9
70°-80°	319.3	4.0
80°-90°	68.5	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°	2880.6	35.8
0°-40°	4427.6	55.0
0°-60°	6944.6	86.2
0°-90°	8053.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8053.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4102	4102	4102	4102	4102	
5°	4031	4026	4026	4022	4022	383
15°	3770	3770	3732	3694	3680	1060
25°	3267	3248	3196	3082	2997	1500
35°	2651	2632	2504	2314	2257	1657
45°	2034	1992	1821	1669	1603	1567
55°	1413	1370	1242	1096	1039	1268
65°	839	792	716	730	607	827
75°	337	313	294	280	308	361
85°	47	52	57	62	66	66
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4102.1	4102.1	4102.1	4102.1	4102.1
2.5°	4073.6	4073.6	4073.6	4068.9	4068.9
5°	4031.0	4026.2	4026.2	4021.5	4021.5
7.5°	3997.8	3993.0	3988.3	3983.5	3974.0
10°	3950.3	3950.3	3945.6	3921.9	3917.1
12.5°	3874.5	3869.7	3850.7	3817.6	3808.1
15°	3770.1	3770.1	3732.2	3694.3	3680.0
17.5°	3656.3	3651.6	3604.1	3566.2	3547.2
20°	3533.0	3523.5	3476.1	3414.5	3381.3
22.5°	3395.5	3395.5	3338.6	3258.0	3224.8
25°	3267.4	3248.5	3196.3	3082.5	2997.1
27.5°	3120.4	3092.0	3035.1	2873.8	2774.2
30°	2959.2	2945.0	2864.3	2655.7	2579.8
32.5°	2807.4	2783.7	2698.4	2480.2	2418.6
35°	2650.9	2632.0	2503.9	2314.2	2257.3
37.5°	2494.5	2470.7	2309.5	2157.7	2086.6
40°	2338.0	2309.5	2134.0	1996.5	1920.6
42.5°	2190.9	2153.0	1982.3	1835.3	1749.9
45°	2034.4	1991.8	1821.0	1669.3	1602.9
47.5°	1878.0	1840.0	1683.5	1527.0	1451.1
50°	1712.0	1678.8	1536.5	1380.0	1299.4
52.5°	1574.4	1522.3	1384.8	1228.3	1161.9
55°	1413.2	1370.5	1242.5	1095.5	1038.6
57.5°	1266.2	1223.5	1105.0	967.4	920.0
60°	1128.7	1067.0	967.4	848.9	810.9
62.5°	976.9	929.5	844.1	744.5	792.0
65°	839.4	792.0	716.1	730.3	607.0
67.5°	687.6	663.9	597.5	531.1	512.2
70°	559.6	531.1	507.4	436.3	417.3
72.5°	445.8	417.3	384.1	346.2	332.0
75°	336.7	313.0	294.0	279.8	308.2
77.5°	232.4	222.9	208.7	194.4	189.7
80°	151.8	147.0	142.3	137.5	132.8
82.5°	90.1	90.1	90.1	90.1	90.1
85°	47.4	52.2	56.9	61.6	66.4
87.5°	28.5	28.5	33.2	37.9	42.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)