

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: P561338

Luminaire Tested: FSR-12-4-LD4-2HI-35-UNV-80-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561338
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-12-4-LD4-2HI-35-UNV-80-94-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6834.0 lumens
Efficiency: N/A
Efficacy: 79.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

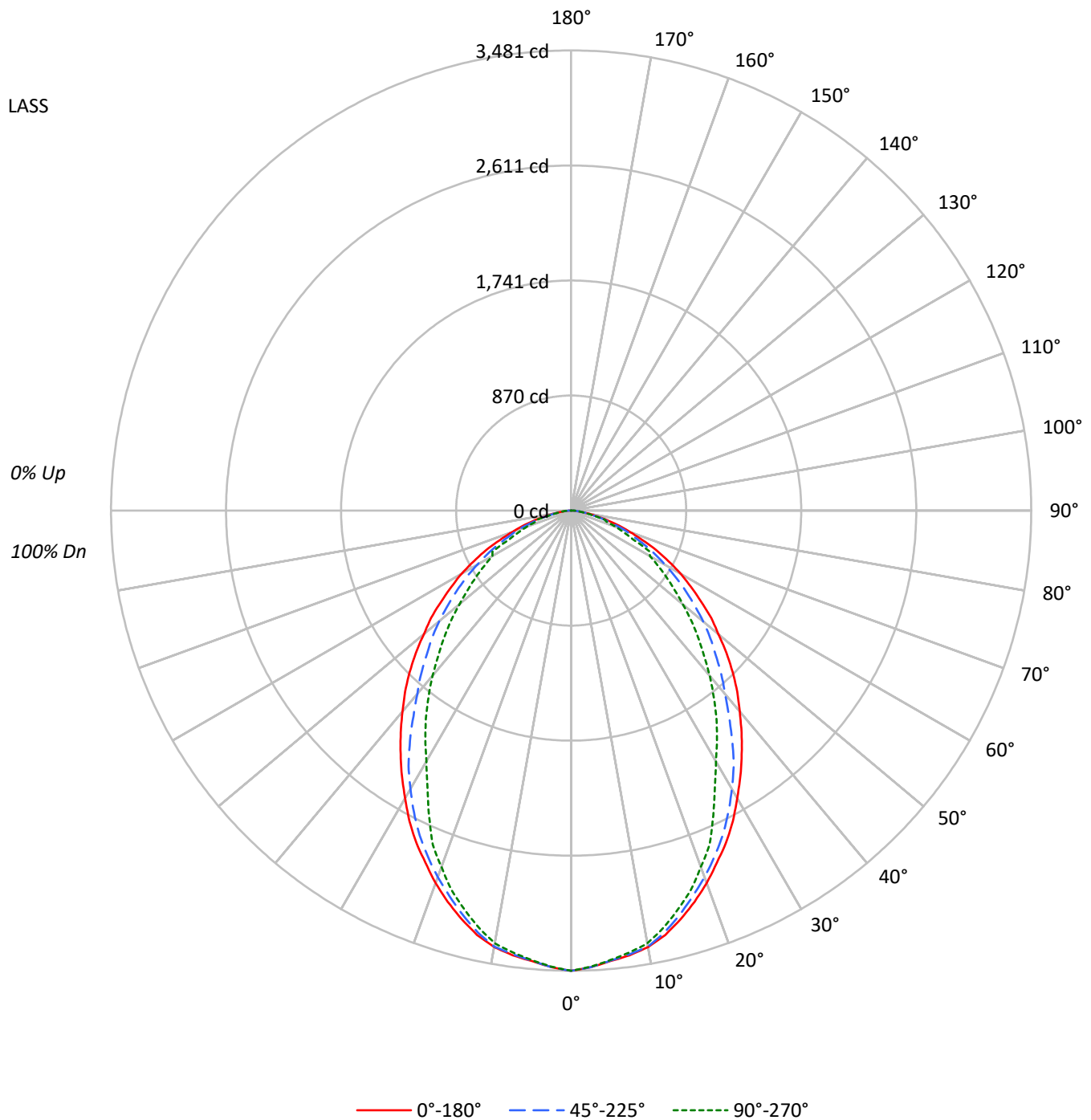
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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									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°	9368	9368	9368
5°	9240	9230	9219
10°	9160	9149	9083
15°	8913	8824	8700
20°	8586	8448	8217
25°	8233	8054	7552
30°	7803	7553	6803
35°	7390	6980	6293
40°	6970	6362	5726
45°	6570	5881	5177
50°	6082	5459	4616
55°	5627	4947	4135
60°	5155	4419	3704
65°	4535	3869	3280
70°	3736	3388	2787
75°	2970	2594	2720
80°	1996	1870	1746
85°	1241	1491	1738

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6570 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	324.0	4.7
10°-20°	889.3	13.0
20°-30°	1231.2	18.0
30°-40°	1312.8	19.2
40°-50°	1197.7	17.5
50°-60°	938.3	13.7
60°-70°	611.5	8.9
70°-80°	270.9	4.0
80°-90°	58.2	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°	2444.6	35.8
0°-40°	3757.4	55.0
0°-60°	5893.4	86.2
0°-90°	6834.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6834.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3481	3481	3481	3481	3481	
5°	3421	3417	3417	3413	3413	325
15°	3199	3199	3167	3135	3123	899
25°	2773	2757	2712	2616	2544	1273
35°	2250	2234	2125	1964	1916	1406
45°	1726	1690	1545	1417	1360	1330
55°	1199	1163	1054	930	881	1076
65°	712	672	608	620	515	702
75°	286	266	250	237	262	306
85°	40	44	48	52	56	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3481.1	3481.1	3481.1	3481.1	3481.1
2.5°	3457.0	3457.0	3457.0	3453.0	3453.0
5°	3420.8	3416.8	3416.8	3412.7	3412.7
7.5°	3392.6	3388.6	3384.6	3380.5	3372.5
10°	3352.4	3352.4	3348.3	3328.2	3324.2
12.5°	3288.0	3284.0	3267.9	3239.7	3231.6
15°	3199.4	3199.4	3167.2	3135.0	3123.0
17.5°	3102.9	3098.8	3058.6	3026.4	3010.3
20°	2998.2	2990.2	2949.9	2897.6	2869.4
22.5°	2881.5	2881.5	2833.2	2764.8	2736.6
25°	2772.8	2756.7	2712.5	2615.9	2543.5
27.5°	2648.1	2623.9	2575.6	2438.8	2354.3
30°	2511.3	2499.2	2430.8	2253.7	2189.3
32.5°	2382.5	2362.4	2289.9	2104.8	2052.5
35°	2249.7	2233.6	2124.9	1963.9	1915.6
37.5°	2116.9	2096.7	1959.9	1831.1	1770.8
40°	1984.1	1959.9	1811.0	1694.3	1629.9
42.5°	1859.3	1827.1	1682.2	1557.5	1485.0
45°	1726.5	1690.3	1545.4	1416.6	1360.3
47.5°	1593.7	1561.5	1428.7	1295.9	1231.5
50°	1452.8	1424.7	1303.9	1171.1	1102.7
52.5°	1336.1	1291.8	1175.1	1042.3	986.0
55°	1199.3	1163.1	1054.4	929.6	881.4
57.5°	1074.5	1038.3	937.7	821.0	780.7
60°	957.8	905.5	821.0	720.4	688.2
62.5°	829.0	788.8	716.4	631.8	672.1
65°	712.3	672.1	607.7	619.8	515.1
67.5°	583.5	563.4	507.1	450.7	434.6
70°	474.9	450.7	430.6	370.2	354.2
72.5°	378.3	354.2	326.0	293.8	281.7
75°	285.7	265.6	249.5	237.4	261.6
77.5°	197.2	189.1	177.1	165.0	161.0
80°	128.8	124.8	120.7	116.7	112.7
82.5°	76.5	76.5	76.5	76.5	76.5
85°	40.2	44.3	48.3	52.3	56.3
87.5°	24.1	24.1	28.2	32.2	36.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)