

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: P561460

Luminaire Tested: FSR-12-4-LD4-2HI-50-UNV-80-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561460
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-50-UNV-80-86-EDD-90
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

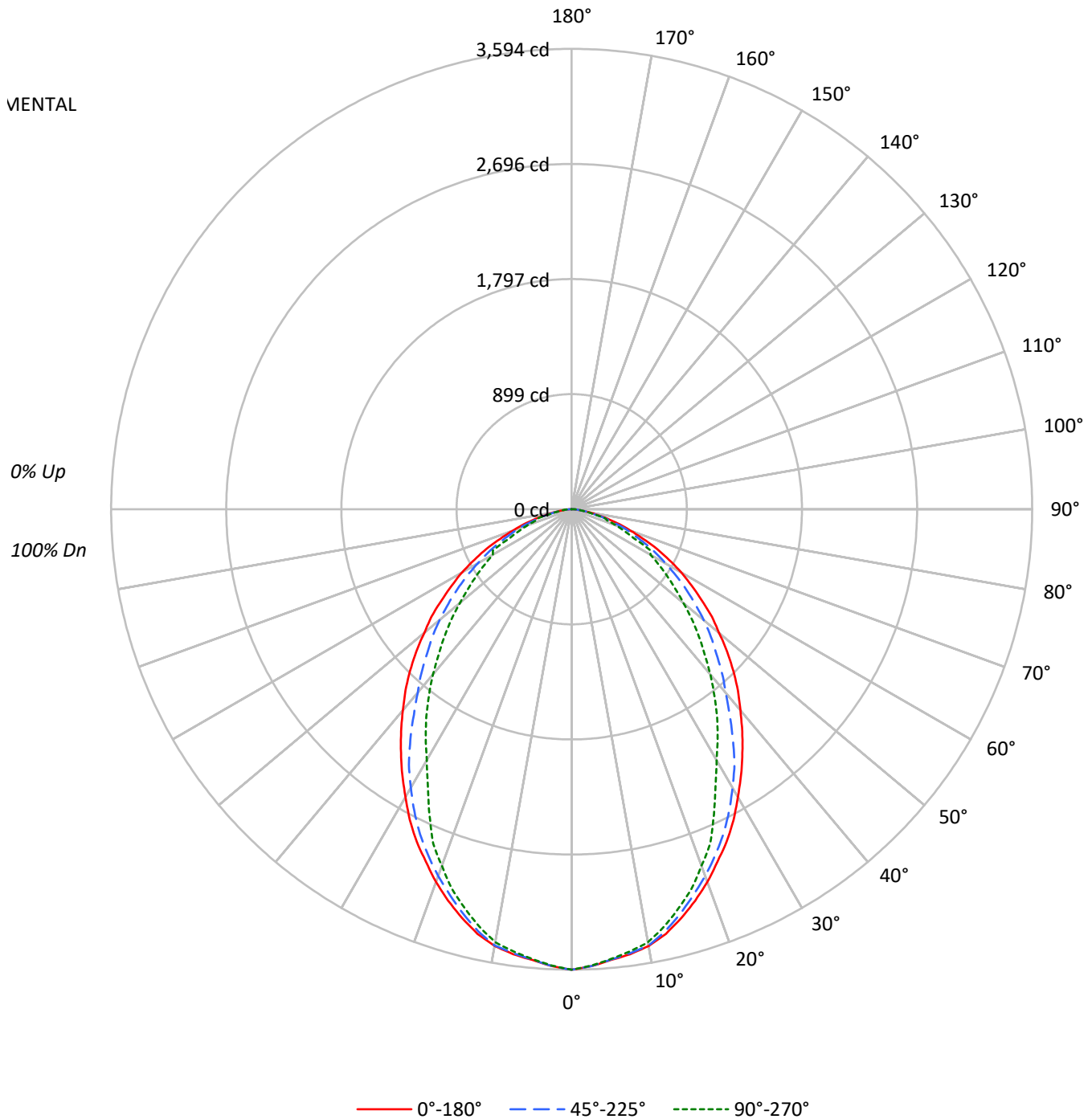
Lumens per Lamp: N/A
Luminaire Lumens: 7056.0 lumens
Efficiency: N/A
Efficacy: 81.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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																												
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°	9672	9672	9672
5°	9541	9529	9518
10°	9458	9446	9378
15°	9203	9110	8983
20°	8865	8722	8484
25°	8500	8315	7797
30°	8057	7798	7024
35°	7630	7207	6498
40°	7196	6568	5911
45°	6784	6072	5345
50°	6280	5636	4766
55°	5809	5108	4269
60°	5322	4562	3824
65°	4683	3995	3387
70°	3858	3498	2877
75°	3067	2678	2808
80°	2061	1932	1802
85°	1284	1541	1797

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6784 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	334.6	4.7
10°-20°	918.2	13.0
20°-30°	1271.2	18.0
30°-40°	1355.5	19.2
40°-50°	1236.6	17.5
50°-60°	968.8	13.7
60°-70°	631.4	8.9
70°-80°	279.7	4.0
80°-90°	60.0	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°	2524.0	35.8
0°-40°	3879.4	55.0
0°-60°	6084.8	86.2
0°-90°	7056.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7056.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3594	3594	3594	3594	3594	
5°	3532	3528	3528	3524	3524	335
15°	3303	3303	3270	3237	3224	929
25°	2863	2846	2801	2701	2626	1314
35°	2323	2306	2194	2028	1978	1452
45°	1783	1745	1596	1463	1404	1373
55°	1238	1201	1089	960	910	1111
65°	736	694	627	640	532	725
75°	295	274	258	245	270	316
85°	42	46	50	54	58	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3594.2	3594.2	3594.2	3594.2	3594.2
2.5°	3569.3	3569.3	3569.3	3565.1	3565.1
5°	3531.9	3527.7	3527.7	3523.6	3523.6
7.5°	3502.8	3498.7	3494.5	3490.4	3482.0
10°	3461.3	3461.3	3457.1	3436.3	3432.2
12.5°	3394.8	3390.6	3374.0	3344.9	3336.6
15°	3303.4	3303.4	3270.1	3236.9	3224.4
17.5°	3203.6	3199.5	3157.9	3124.7	3108.1
20°	3095.6	3087.3	3045.7	2991.7	2962.6
22.5°	2975.1	2975.1	2925.2	2854.6	2825.5
25°	2862.9	2846.3	2800.6	2700.9	2626.1
27.5°	2734.1	2709.2	2659.3	2518.0	2430.8
30°	2592.8	2580.4	2509.7	2326.9	2260.4
32.5°	2459.9	2439.1	2364.3	2173.2	2119.1
35°	2322.7	2306.1	2193.9	2027.7	1977.9
37.5°	2185.6	2164.8	2023.6	1890.6	1828.3
40°	2048.5	2023.6	1869.8	1749.3	1682.8
42.5°	1919.7	1886.5	1736.9	1608.1	1533.3
45°	1782.6	1745.2	1595.6	1462.6	1404.5
47.5°	1645.5	1612.2	1475.1	1338.0	1271.5
50°	1500.0	1470.9	1346.3	1209.2	1138.5
52.5°	1379.5	1333.8	1213.3	1076.2	1018.0
55°	1238.2	1200.8	1088.7	959.8	910.0
57.5°	1109.4	1072.0	968.2	847.7	806.1
60°	988.9	934.9	847.7	743.8	710.5
62.5°	856.0	814.4	739.6	652.4	693.9
65°	735.5	693.9	627.4	639.9	531.9
67.5°	602.5	581.7	523.6	465.4	448.8
70°	490.3	465.4	444.6	382.3	365.7
72.5°	390.6	365.7	336.6	303.3	290.9
75°	295.0	274.2	257.6	245.2	270.1
77.5°	203.6	195.3	182.8	170.4	166.2
80°	133.0	128.8	124.7	120.5	116.3
82.5°	78.9	78.9	78.9	78.9	78.9
85°	41.6	45.7	49.9	54.0	58.2
87.5°	24.9	24.9	29.1	33.2	37.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)