

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: P561463

Luminaire Tested: FSR-12-4-LD4-2HI-50-UNV-80-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561463
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-80-87-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7847.0 lumens
Efficiency: N/A
Efficacy: 90.8 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

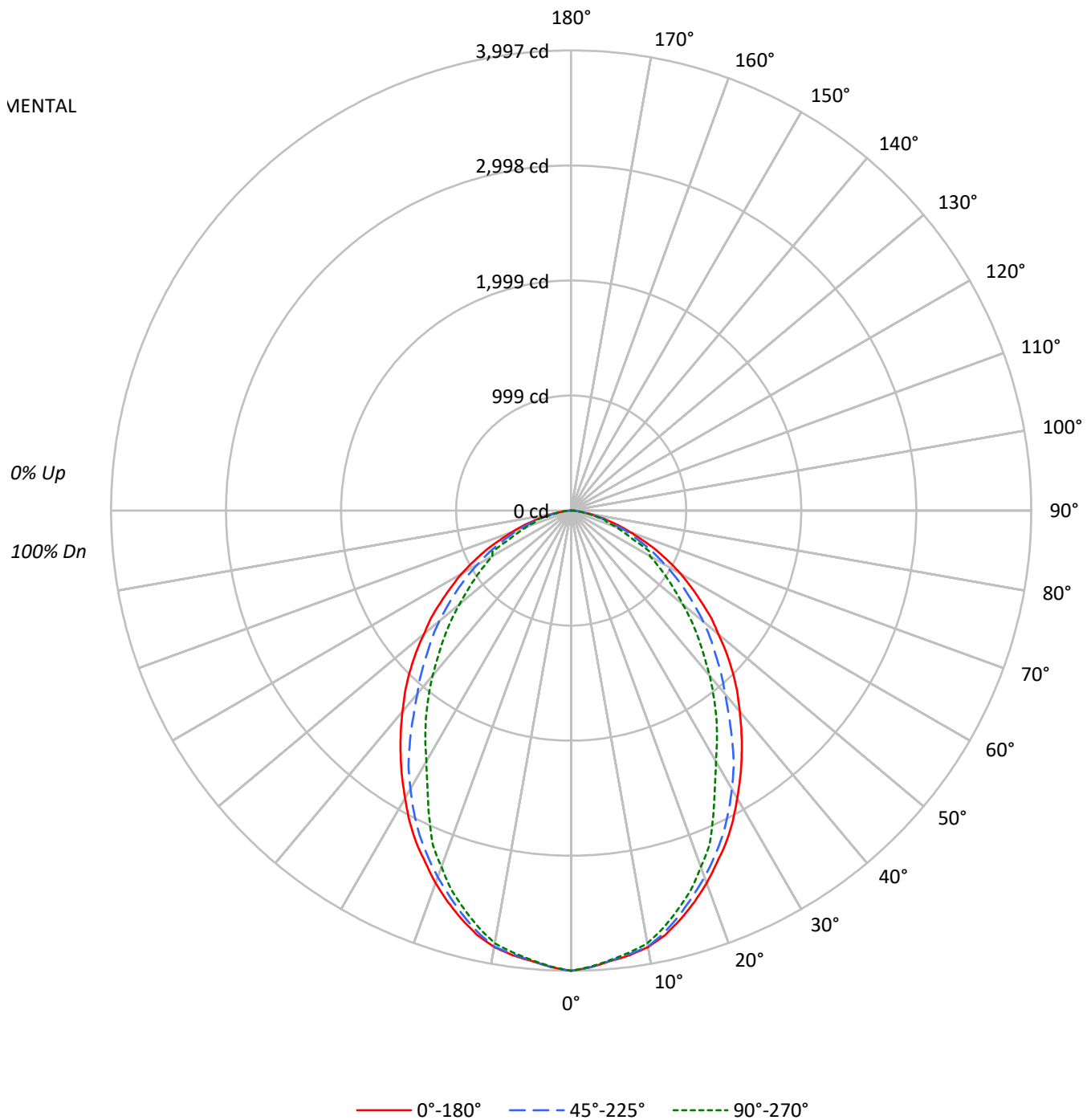
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	10756	10756	10756
5°	10610	10598	10585
10°	10518	10506	10430
15°	10235	10132	9990
20°	9859	9700	9435
25°	9454	9247	8671
30°	8960	8673	7811
35°	8486	8015	7226
40°	8003	7305	6574
45°	7544	6753	5944
50°	6984	6268	5301
55°	6461	5680	4748
60°	5919	5074	4253
65°	5208	4443	3766
70°	4290	3890	3199
75°	3411	2979	3123
80°	2292	2148	2005
85°	1426	1714	1998

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7544 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	372.1	4.7
10°-20°	1021.1	13.0
20°-30°	1413.7	18.0
30°-40°	1507.4	19.2
40°-50°	1375.2	17.5
50°-60°	1077.4	13.7
60°-70°	702.2	8.9
70°-80°	311.1	4.0
80°-90°	66.8	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°	2806.9	35.8
0°-40°	4314.4	55.0
0°-60°	6766.9	86.2
0°-90°	7847.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7847.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3997	3997	3997	3997	3997	
5°	3928	3923	3923	3919	3919	373
15°	3674	3674	3637	3600	3586	1033
25°	3184	3165	3114	3004	2920	1462
35°	2583	2565	2440	2255	2200	1615
45°	1982	1941	1774	1627	1562	1527
55°	1377	1336	1211	1067	1012	1235
65°	818	772	698	712	592	806
75°	328	305	286	273	300	352
85°	46	51	56	60	65	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3997.2	3997.2	3997.2	3997.2	3997.2
2.5°	3969.4	3969.4	3969.4	3964.8	3964.8
5°	3927.8	3923.2	3923.2	3918.6	3918.6
7.5°	3895.5	3890.9	3886.3	3881.6	3872.4
10°	3849.3	3849.3	3844.7	3821.6	3816.9
12.5°	3775.3	3770.7	3752.2	3719.9	3710.7
15°	3673.7	3673.7	3636.7	3599.8	3585.9
17.5°	3562.8	3558.2	3512.0	3475.0	3456.5
20°	3442.6	3433.4	3387.2	3327.1	3294.8
22.5°	3308.6	3308.6	3253.2	3174.6	3142.3
25°	3183.9	3165.4	3114.5	3003.6	2920.5
27.5°	3040.6	3012.9	2957.4	2800.3	2703.3
30°	2883.5	2869.6	2791.1	2587.8	2513.8
32.5°	2735.6	2712.5	2629.3	2416.8	2356.7
35°	2583.1	2564.6	2439.9	2255.0	2199.6
37.5°	2430.6	2407.5	2250.4	2102.6	2033.2
40°	2278.1	2250.4	2079.4	1945.4	1871.5
42.5°	2134.9	2097.9	1931.6	1788.3	1705.1
45°	1982.4	1940.8	1774.5	1626.6	1561.9
47.5°	1829.9	1792.9	1640.5	1488.0	1414.0
50°	1668.2	1635.8	1497.2	1344.7	1266.2
52.5°	1534.2	1483.3	1349.3	1196.8	1132.1
55°	1377.1	1335.5	1210.7	1067.4	1012.0
57.5°	1233.8	1192.2	1076.7	942.7	896.5
60°	1099.8	1039.7	942.7	827.2	790.2
62.5°	951.9	905.7	822.5	725.5	771.7
65°	817.9	771.7	697.8	711.6	591.5
67.5°	670.0	646.9	582.2	517.6	499.1
70°	545.3	517.6	494.4	425.1	406.6
72.5°	434.4	406.6	374.3	337.3	323.5
75°	328.1	305.0	286.5	272.6	300.4
77.5°	226.4	217.2	203.3	189.5	184.8
80°	147.9	143.3	138.6	134.0	129.4
82.5°	87.8	87.8	87.8	87.8	87.8
85°	46.2	50.8	55.5	60.1	64.7
87.5°	27.7	27.7	32.3	37.0	41.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)