

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: P590744

Luminaire Tested: FSR-24-2-LD4-4HI-40-UNV-80-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590744
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-4HI-40-UNV-80-87-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9066.0 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

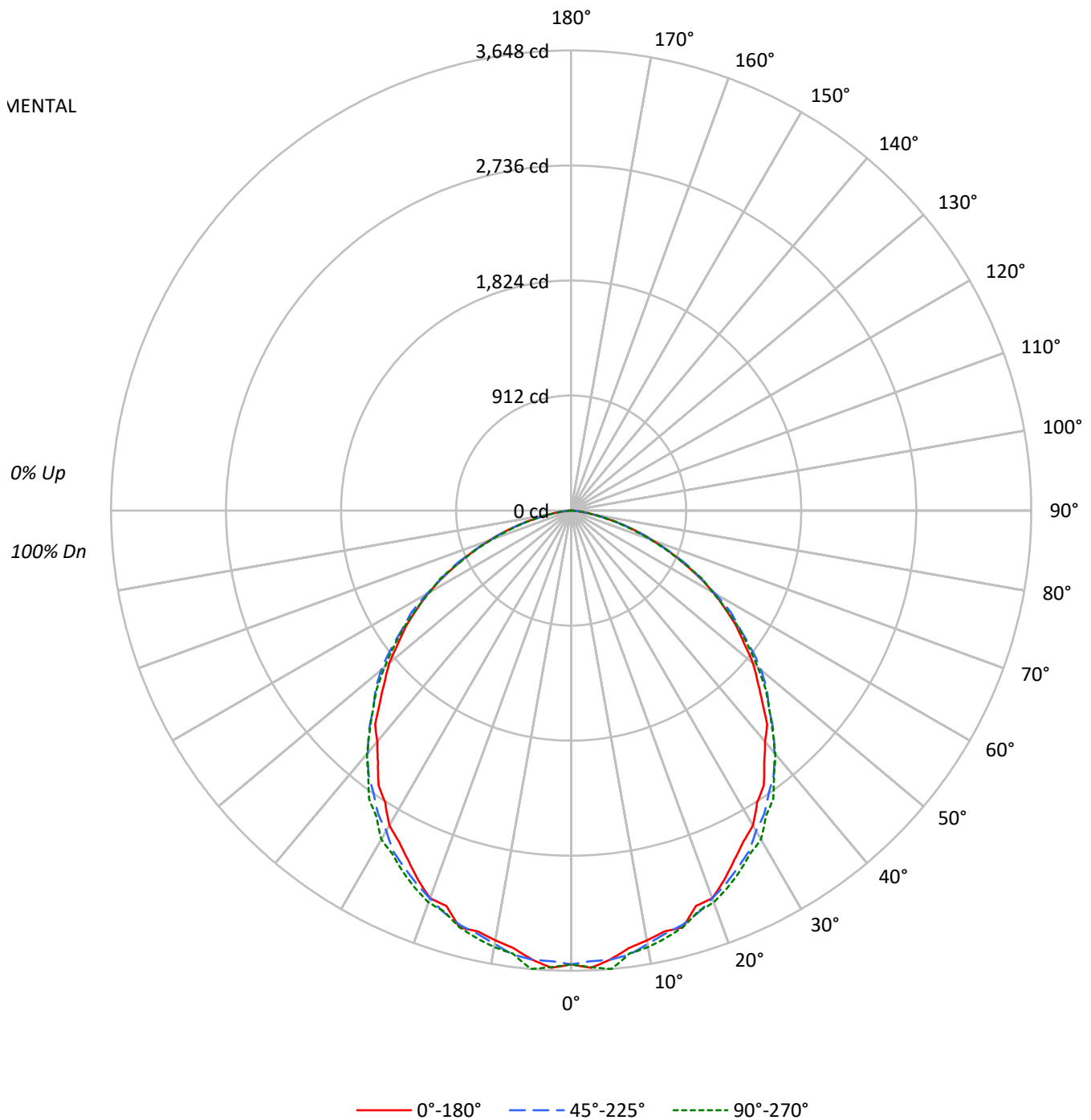
Input Watts (W): 86.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88					86				
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75					73				
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64					62				
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55					53				
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48					46				
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43					41				
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38					36				
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34					32				
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31					29				
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28					26				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9680	9680	9680
5°	9648	9652	9855
10°	9452	9535	9602
15°	9527	9475	9528
20°	9366	9366	9466
25°	9078	9277	9379
30°	8953	9111	9353
35°	8743	8972	9173
40°	8402	8807	8846
45°	8148	8438	8450
50°	7881	8236	8079
55°	7509	7655	7600
60°	7021	7091	6964
65°	6260	6420	6216
70°	5371	5390	5240
75°	4255	4245	4081
80°	2850	2771	2662
85°	1550	1535	1433

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 8655 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	338.4	3.7
10°-20°	959.0	10.6
20°-30°	1436.7	15.8
30°-40°	1702.8	18.8
40°-50°	1706.0	18.8
50°-60°	1448.1	16.0
60°-70°	976.3	10.8
70°-80°	429.0	4.7
80°-90°	69.7	0.8
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°	2734.1	30.2
0°-40°	4436.9	48.9
0°-60°	7591.0	83.7
0°-90°	9066.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9066.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3597	3597	3597	3597	3597	
5°	3572	3563	3573	3562	3648	337
15°	3420	3380	3401	3419	3420	953
25°	3058	3074	3124	3165	3159	1413
35°	2661	2669	2731	2794	2792	1652
45°	2141	2181	2217	2274	2220	1656
55°	1600	1590	1632	1620	1620	1424
65°	983	970	1008	970	976	978
75°	409	401	408	380	392	439
85°	50	49	50	48	46	73
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3597.2	3597.2	3597.2	3597.2	3597.2
2.5°	3628.3	3600.9	3575.3	3605.1	3623.2
5°	3571.6	3563.3	3573.0	3562.3	3648.2
7.5°	3498.2	3530.3	3548.9	3537.2	3542.4
10°	3459.2	3448.1	3489.4	3518.2	3514.0
12.5°	3417.4	3434.1	3436.5	3467.6	3470.4
15°	3419.7	3380.3	3401.2	3418.8	3420.2
17.5°	3286.9	3329.6	3344.0	3384.4	3334.3
20°	3270.7	3239.5	3270.7	3312.0	3305.5
22.5°	3170.8	3136.0	3202.8	3239.5	3237.2
25°	3057.5	3074.2	3124.4	3165.2	3158.7
27.5°	2958.1	2977.6	3049.1	3105.3	3069.1
30°	2881.4	2871.7	2932.1	2982.2	3010.1
32.5°	2744.4	2779.7	2850.3	2900.0	2873.5
35°	2661.3	2669.2	2731.0	2794.1	2792.3
37.5°	2515.9	2552.6	2639.5	2657.1	2640.9
40°	2391.9	2428.6	2507.1	2526.1	2518.2
42.5°	2300.4	2306.9	2374.3	2396.1	2361.3
45°	2141.1	2181.1	2217.3	2274.4	2220.5
47.5°	2005.5	2024.1	2102.1	2117.4	2089.1
50°	1882.4	1888.9	1967.4	1948.4	1929.8
52.5°	1727.8	1755.2	1799.3	1795.6	1773.7
55°	1600.5	1589.8	1631.6	1620.5	1620.0
57.5°	1447.7	1466.3	1500.6	1483.0	1454.7
60°	1304.6	1305.1	1317.6	1297.7	1294.0
62.5°	1145.3	1150.9	1153.7	1129.1	1169.0
65°	983.2	970.2	1008.3	969.8	976.3
67.5°	834.2	840.7	836.9	812.8	822.1
70°	682.7	691.1	685.1	657.7	666.0
72.5°	544.3	534.1	540.6	506.2	522.0
75°	409.2	400.8	408.3	379.5	392.5
77.5°	278.7	285.2	280.5	265.2	274.0
80°	183.9	178.8	178.8	170.0	171.8
82.5°	107.3	102.2	100.8	98.0	102.2
85°	50.2	48.8	49.7	48.3	46.4
87.5°	18.1	18.6	18.6	17.6	16.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)