

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: P590454

Luminaire Tested: FSR-24-2-LD4-3HI-40-UNV-80-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590454
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-LD4-3HI-40-UNV-80-85-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7108.0 lumens
Efficiency: N/A
Efficacy: 109.7 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

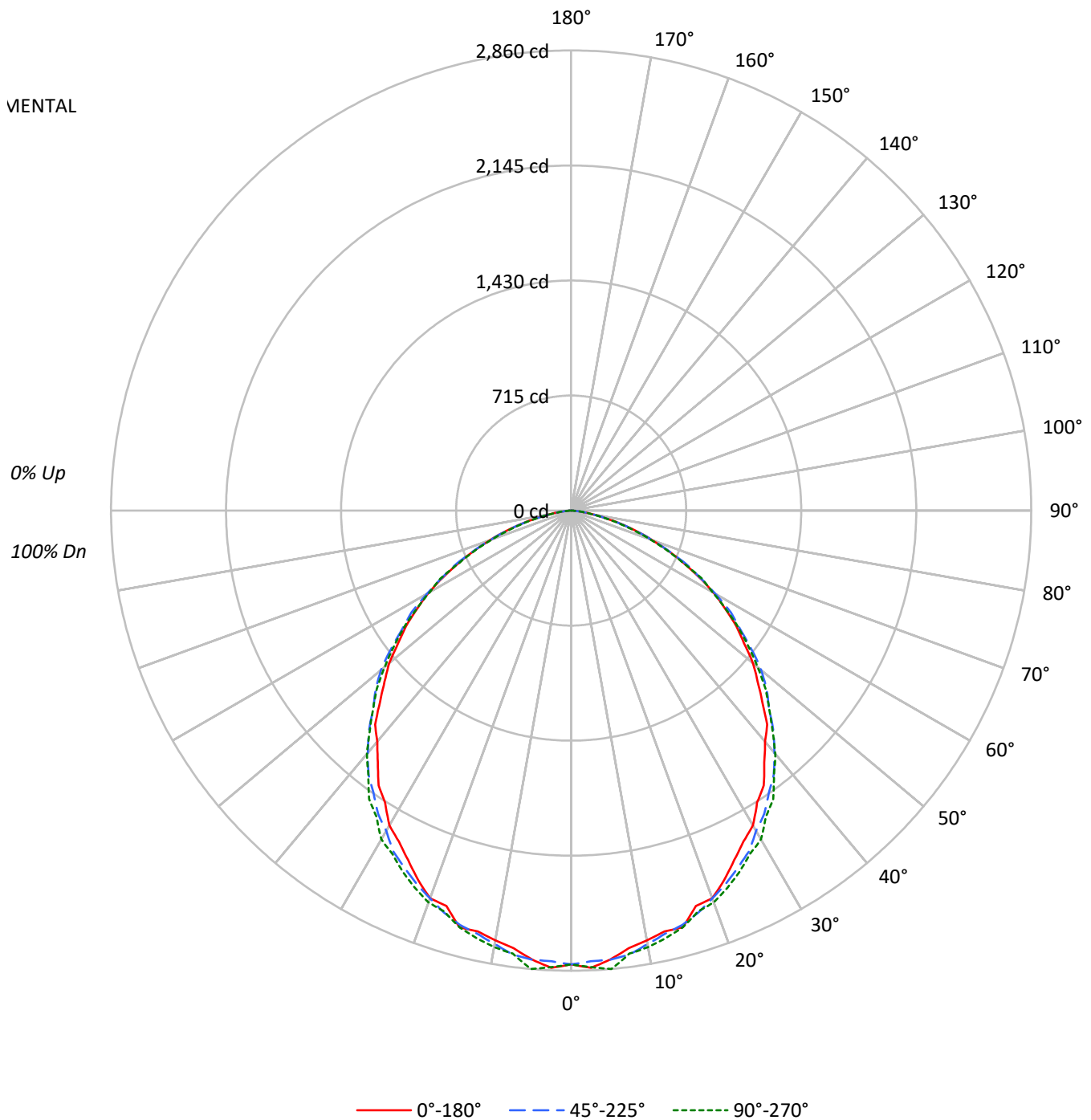
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	7589	7589	7589
5°	7564	7567	7726
10°	7411	7476	7528
15°	7470	7429	7470
20°	7343	7343	7422
25°	7117	7273	7353
30°	7020	7143	7333
35°	6854	7034	7192
40°	6588	6905	6936
45°	6388	6616	6626
50°	6179	6458	6334
55°	5887	6001	5959
60°	5505	5560	5460
65°	4909	5034	4874
70°	4212	4226	4109
75°	3335	3328	3199
80°	2235	2173	2087
85°	1213	1204	1124

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6786 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	265.3	3.7
10°-20°	751.9	10.6
20°-30°	1126.4	15.8
30°-40°	1335.1	18.8
40°-50°	1337.5	18.8
50°-60°	1135.4	16.0
60°-70°	765.4	10.8
70°-80°	336.3	4.7
80°-90°	54.7	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°	2143.6	30.2
0°-40°	3478.7	48.9
0°-60°	5951.6	83.7
0°-90°	7108.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7108.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2820	2820	2820	2820	2820	
5°	2800	2794	2801	2793	2860	264
15°	2681	2650	2667	2680	2682	747
25°	2397	2410	2450	2482	2476	1108
35°	2086	2093	2141	2191	2189	1295
45°	1679	1710	1738	1783	1741	1299
55°	1255	1246	1279	1270	1270	1116
65°	771	761	791	760	765	767
75°	321	314	320	298	308	344
85°	39	38	39	38	36	57
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2820.3	2820.3	2820.3	2820.3	2820.3
2.5°	2844.7	2823.2	2803.2	2826.5	2840.7
5°	2800.2	2793.7	2801.3	2793.0	2860.3
7.5°	2742.7	2767.8	2782.4	2773.3	2777.3
10°	2712.1	2703.4	2735.8	2758.4	2755.1
12.5°	2679.4	2692.5	2694.3	2718.7	2720.9
15°	2681.2	2650.2	2666.6	2680.4	2681.5
17.5°	2577.0	2610.5	2621.8	2653.5	2614.2
20°	2564.3	2539.9	2564.3	2596.7	2591.6
22.5°	2486.0	2458.7	2511.1	2539.9	2538.1
25°	2397.1	2410.3	2449.6	2481.6	2476.5
27.5°	2319.2	2334.5	2390.6	2434.6	2406.2
30°	2259.1	2251.5	2298.8	2338.2	2360.0
32.5°	2151.7	2179.4	2234.7	2273.7	2252.9
35°	2086.5	2092.7	2141.2	2190.7	2189.2
37.5°	1972.6	2001.3	2069.4	2083.3	2070.5
40°	1875.3	1904.1	1965.6	1980.6	1974.4
42.5°	1803.6	1808.7	1861.5	1878.6	1851.3
45°	1678.7	1710.0	1738.4	1783.2	1741.0
47.5°	1572.4	1586.9	1648.1	1660.1	1637.9
50°	1475.9	1481.0	1542.5	1527.6	1513.0
52.5°	1354.6	1376.1	1410.7	1407.8	1390.7
55°	1254.8	1246.5	1279.2	1270.5	1270.1
57.5°	1135.0	1149.6	1176.5	1162.7	1140.5
60°	1022.9	1023.2	1033.1	1017.4	1014.5
62.5°	898.0	902.3	904.5	885.2	916.5
65°	770.9	760.7	790.6	760.3	765.4
67.5°	654.0	659.1	656.2	637.2	644.5
70°	535.3	541.8	537.1	515.6	522.2
72.5°	426.8	418.8	423.9	396.9	409.3
75°	320.8	314.3	320.1	297.5	307.7
77.5°	218.5	223.6	219.9	207.9	214.8
80°	144.2	140.2	140.2	133.3	134.7
82.5°	84.1	80.1	79.0	76.8	80.1
85°	39.3	38.2	39.0	37.9	36.4
87.5°	14.2	14.6	14.6	13.8	13.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)