

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: P590474

Luminaire Tested: FSR-24-2-LD4-3HI-40-UNV-82-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590474
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-82-94-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6760.0 lumens
Efficiency: N/A
Efficacy: 104.3 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

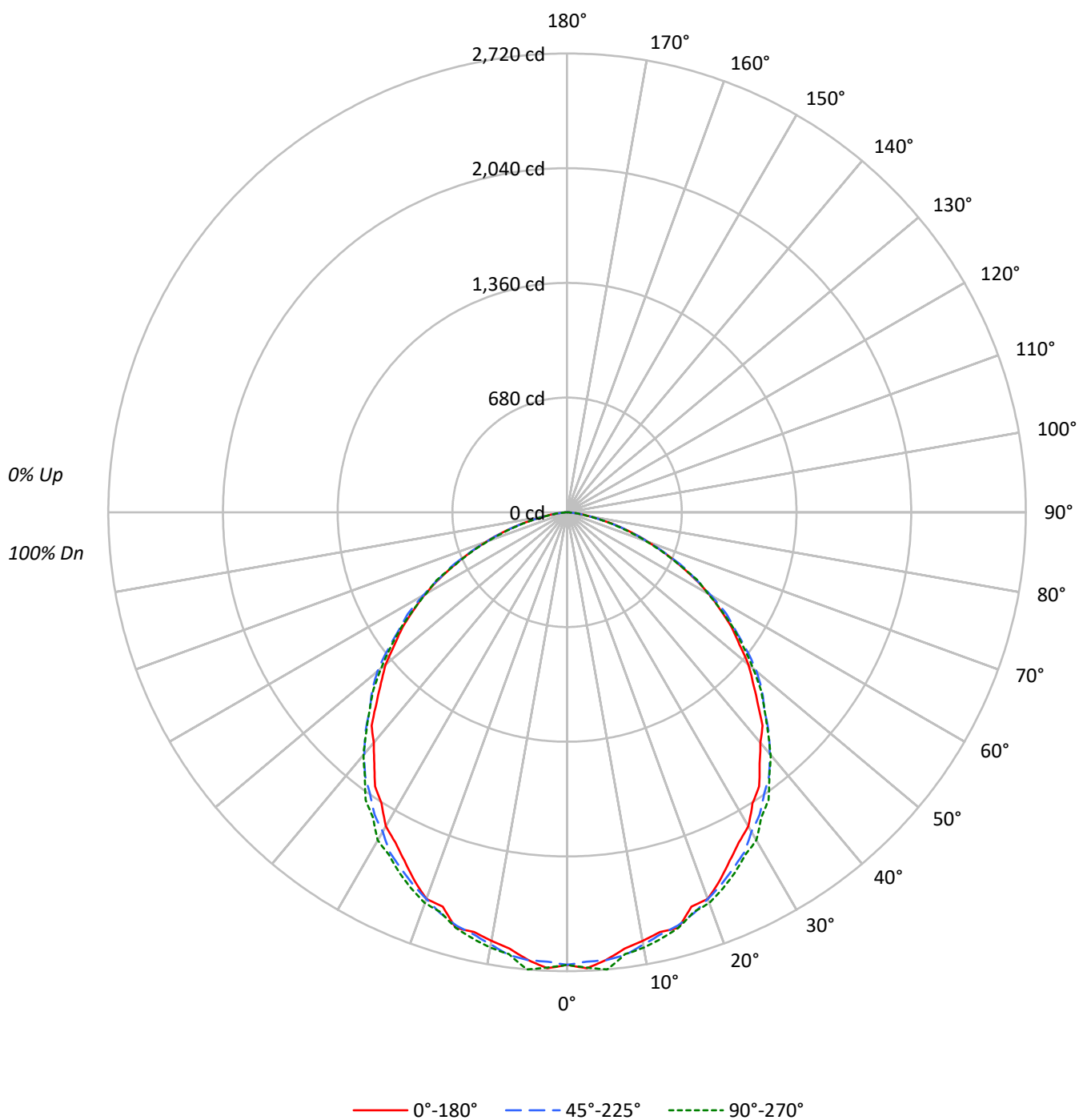
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	7218	7218	7218
5°	7194	7197	7348
10°	7048	7110	7160
15°	7104	7065	7105
20°	6984	6984	7058
25°	6769	6917	6993
30°	6676	6793	6974
35°	6519	6689	6840
40°	6265	6567	6596
45°	6076	6292	6301
50°	5876	6141	6024
55°	5599	5708	5667
60°	5236	5288	5193
65°	4668	4787	4635
70°	4006	4019	3907
75°	3172	3165	3042
80°	2125	2066	1985
85°	1155	1145	1068

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 6454 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	252.3	3.7
10°-20°	715.1	10.6
20°-30°	1071.3	15.8
30°-40°	1269.7	18.8
40°-50°	1272.0	18.8
50°-60°	1079.8	16.0
60°-70°	728.0	10.8
70°-80°	319.9	4.7
80°-90°	52.0	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°	2038.7	30.2
0°-40°	3308.4	48.9
0°-60°	5660.2	83.7
0°-90°	6760.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6760.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2682	2682	2682	2682	2682	
5°	2663	2657	2664	2656	2720	251
15°	2550	2520	2536	2549	2550	710
25°	2280	2292	2330	2360	2355	1054
35°	1984	1990	2036	2083	2082	1232
45°	1596	1626	1653	1696	1656	1235
55°	1193	1185	1217	1208	1208	1062
65°	733	723	752	723	728	729
75°	305	299	304	283	293	327
85°	37	36	37	36	35	54
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2682.2	2682.2	2682.2	2682.2	2682.2
2.5°	2705.4	2685.0	2665.9	2688.1	2701.6
5°	2663.2	2656.9	2664.2	2656.2	2720.3
7.5°	2608.4	2632.3	2646.2	2637.5	2641.3
10°	2579.3	2571.0	2601.9	2623.3	2620.2
12.5°	2548.2	2560.6	2562.4	2585.6	2587.7
15°	2549.9	2520.5	2536.1	2549.2	2550.3
17.5°	2450.9	2482.7	2493.5	2523.6	2486.2
20°	2438.7	2415.5	2438.7	2469.6	2464.7
22.5°	2364.3	2338.3	2388.2	2415.5	2413.8
25°	2279.8	2292.2	2329.7	2360.1	2355.3
27.5°	2205.7	2220.2	2273.5	2315.5	2288.4
30°	2148.5	2141.3	2186.3	2223.7	2244.5
32.5°	2046.4	2072.7	2125.3	2162.4	2142.6
35°	1984.4	1990.3	2036.3	2083.4	2082.0
37.5°	1876.0	1903.3	1968.1	1981.3	1969.1
40°	1783.5	1810.9	1869.4	1883.6	1877.7
42.5°	1715.3	1720.1	1770.4	1786.6	1760.7
45°	1596.5	1626.3	1653.3	1695.9	1655.7
47.5°	1495.4	1509.2	1567.4	1578.8	1557.7
50°	1403.6	1408.5	1467.0	1452.8	1438.9
52.5°	1288.3	1308.7	1341.6	1338.8	1322.6
55°	1193.4	1185.4	1216.6	1208.3	1207.9
57.5°	1079.5	1093.3	1118.9	1105.8	1084.7
60°	972.8	973.1	982.5	967.6	964.8
62.5°	854.0	858.2	860.2	841.9	871.7
65°	733.1	723.4	751.8	723.1	728.0
67.5°	622.0	626.8	624.1	606.0	613.0
70°	509.1	515.3	510.8	490.4	496.6
72.5°	405.9	398.3	403.1	377.5	389.3
75°	305.1	298.9	304.4	282.9	292.6
77.5°	207.8	212.6	209.2	197.7	204.3
80°	137.1	133.3	133.3	126.8	128.1
82.5°	80.0	76.2	75.2	73.1	76.2
85°	37.4	36.4	37.1	36.0	34.6
87.5°	13.5	13.9	13.9	13.2	12.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)