

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: P590427

Luminaire Tested: FSR-24-2-LD4-3HI-35-UNV-80-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590427
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-35-UNV-80-96-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7117.0 lumens
Efficiency: N/A
Efficacy: 109.8 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

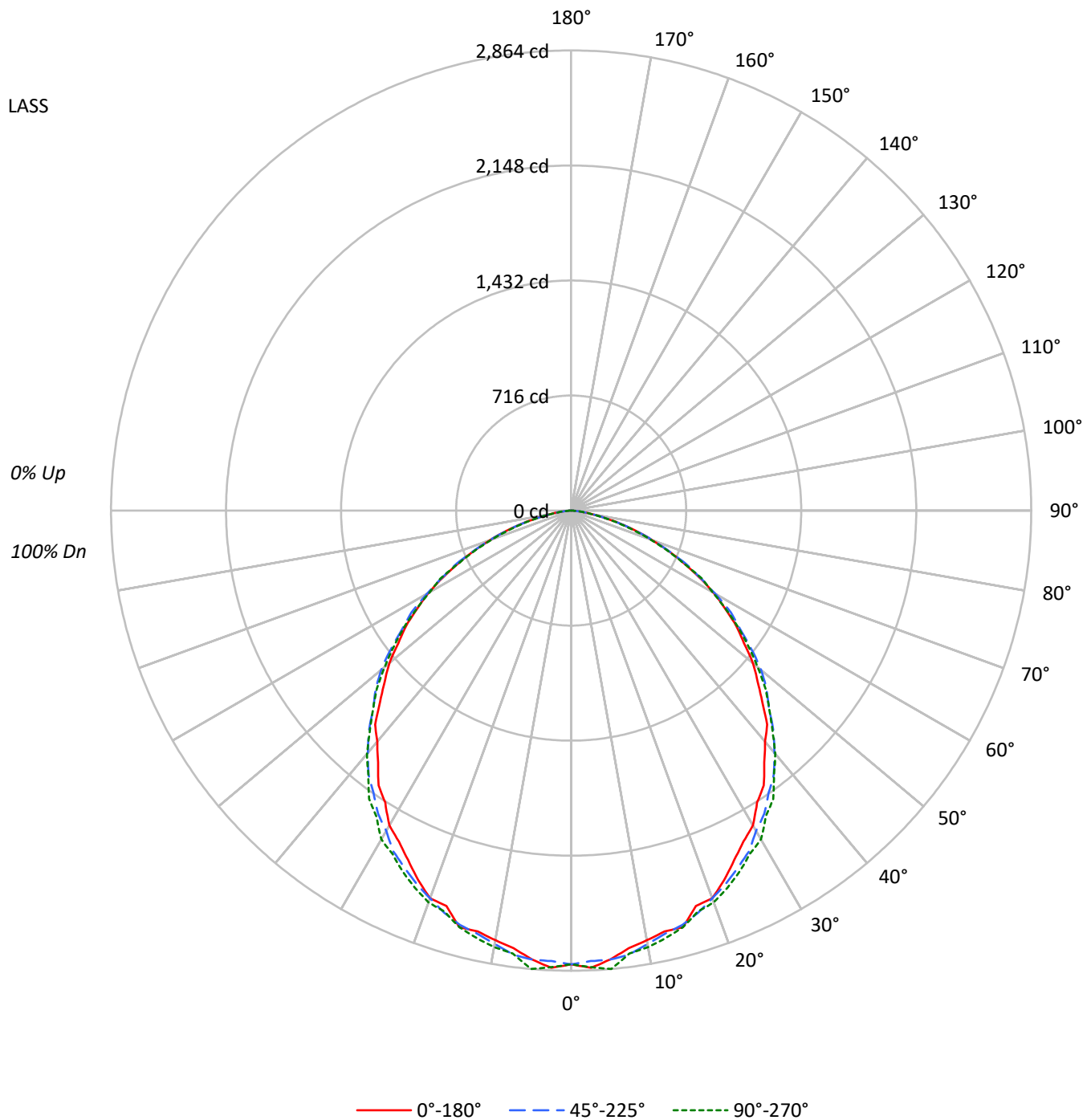
Input Watts (W): 64.8
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
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°	7599	7599	7599
5°	7574	7577	7736
10°	7420	7485	7538
15°	7479	7438	7480
20°	7352	7352	7431
25°	7127	7282	7363
30°	7029	7152	7342
35°	6863	7043	7201
40°	6596	6914	6945
45°	6396	6624	6634
50°	6186	6466	6342
55°	5894	6009	5966
60°	5512	5567	5467
65°	4915	5040	4880
70°	4217	4231	4113
75°	3340	3332	3203
80°	2238	2176	2091
85°	1216	1204	1127

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 6795 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	265.6	3.7
10°-20°	752.8	10.6
20°-30°	1127.9	15.8
30°-40°	1336.8	18.8
40°-50°	1339.2	18.8
50°-60°	1136.8	16.0
60°-70°	766.4	10.8
70°-80°	336.8	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°	2146.3	30.2
0°-40°	3483.1	48.9
0°-60°	5959.1	83.7
0°-90°	7117.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7117.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2824	2824	2824	2824	2824	
5°	2804	2797	2805	2796	2864	264
15°	2685	2654	2670	2684	2685	748
25°	2400	2413	2453	2485	2480	1110
35°	2089	2095	2144	2193	2192	1297
45°	1681	1712	1741	1786	1743	1300
55°	1256	1248	1281	1272	1272	1118
65°	772	762	792	761	766	768
75°	321	315	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°	2823.8	2823.8	2823.8	2823.8	2823.8
2.5°	2848.3	2826.8	2806.7	2830.0	2844.3
5°	2803.8	2797.2	2804.9	2796.5	2864.0
7.5°	2746.2	2771.3	2785.9	2776.8	2780.8
10°	2715.6	2706.8	2739.3	2761.9	2758.6
12.5°	2682.7	2695.9	2697.7	2722.1	2724.3
15°	2684.6	2653.6	2670.0	2683.8	2684.9
17.5°	2580.3	2613.8	2625.1	2656.9	2617.5
20°	2567.5	2543.1	2567.5	2600.0	2594.9
22.5°	2489.1	2461.8	2514.3	2543.1	2541.3
25°	2400.2	2413.3	2452.7	2484.8	2479.7
27.5°	2322.2	2337.5	2393.6	2437.7	2409.3
30°	2262.0	2254.3	2301.7	2341.1	2363.0
32.5°	2154.4	2182.1	2237.6	2276.6	2255.8
35°	2089.2	2095.4	2143.9	2193.4	2192.0
37.5°	1975.1	2003.9	2072.0	2085.9	2073.1
40°	1877.7	1906.5	1968.1	1983.1	1976.9
42.5°	1805.9	1811.0	1863.8	1881.0	1853.6
45°	1680.8	1712.2	1740.6	1785.5	1743.2
47.5°	1574.4	1588.9	1650.2	1662.2	1640.0
50°	1477.7	1482.8	1544.5	1529.5	1514.9
52.5°	1356.3	1377.8	1412.5	1409.6	1392.4
55°	1256.4	1248.0	1280.8	1272.1	1271.7
57.5°	1136.5	1151.0	1178.0	1164.2	1141.9
60°	1024.2	1024.5	1034.4	1018.7	1015.8
62.5°	899.1	903.5	905.7	886.3	917.7
65°	771.9	761.7	791.6	761.3	766.4
67.5°	654.8	659.9	657.0	638.1	645.3
70°	536.0	542.5	537.8	516.3	522.8
72.5°	427.3	419.3	424.4	397.4	409.8
75°	321.2	314.7	320.5	297.9	308.1
77.5°	218.8	223.9	220.2	208.2	215.1
80°	144.4	140.4	140.4	133.4	134.9
82.5°	84.2	80.2	79.1	76.9	80.2
85°	39.4	38.3	39.0	37.9	36.5
87.5°	14.2	14.6	14.6	13.9	13.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)