

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: P563391

Luminaire Tested: FSR-24-4-LD4-3LO-50-UNV-80-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563391
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-24-4-LD4-3LO-50-UNV-80-97-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .375 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

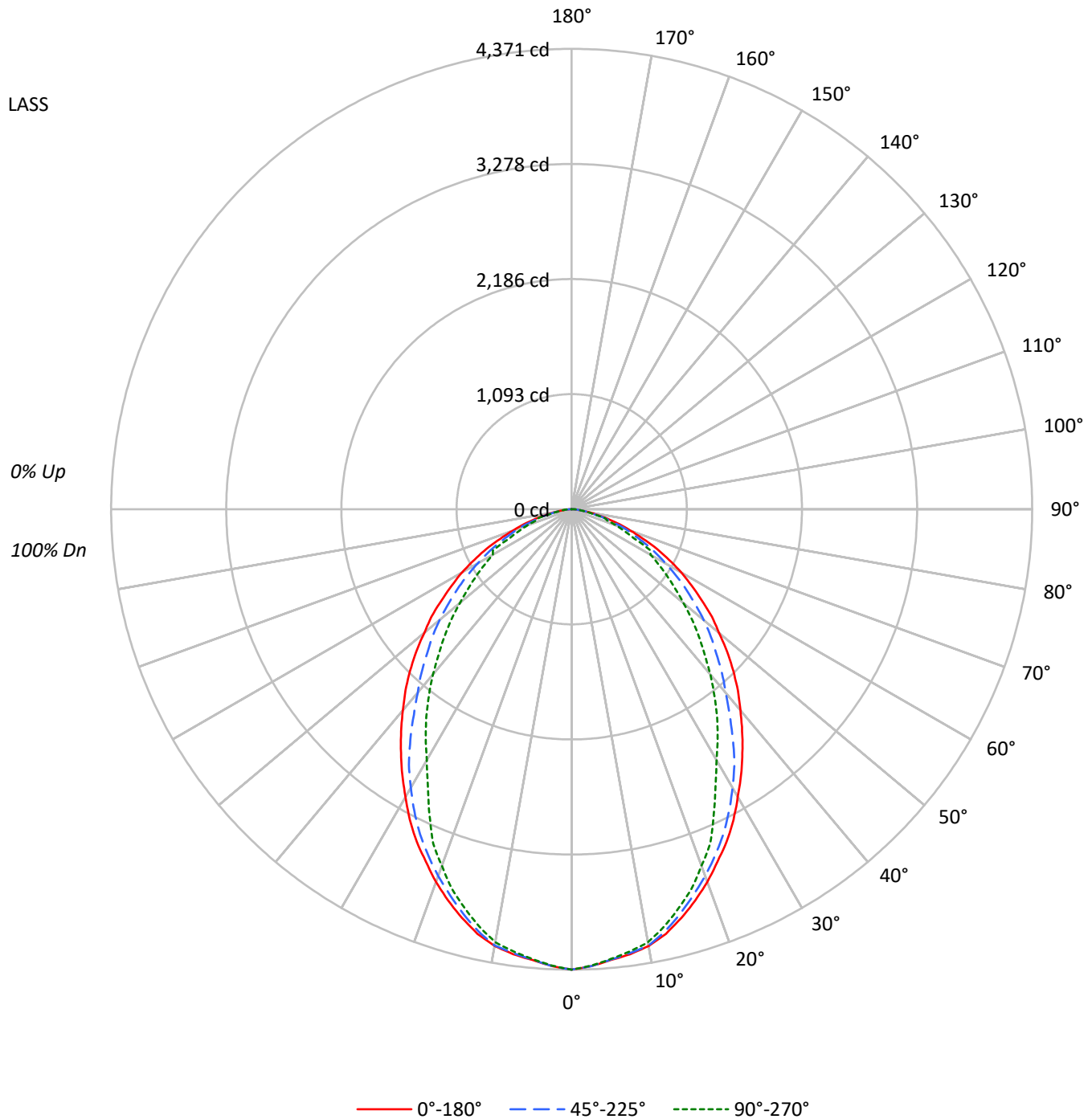
Lumens per Lamp: N/A
Luminaire Lumens: 8581.0 lumens
Efficiency: N/A
Efficacy: 122.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 70.2
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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5881	5881	5881
5°	5801	5794	5788
10°	5751	5744	5703
15°	5596	5540	5462
20°	5390	5304	5159
25°	5169	5056	4741
30°	4899	4742	4271
35°	4640	4382	3951
40°	4376	3994	3595
45°	4125	3692	3250
50°	3818	3427	2898
55°	3533	3106	2596
60°	3236	2774	2325
65°	2848	2429	2059
70°	2346	2127	1749
75°	1865	1629	1708
80°	1253	1175	1096
85°	780	936	1091

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4125 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	406.9	4.7
10°-20°	1116.7	13.0
20°-30°	1546.0	18.0
30°-40°	1648.4	19.2
40°-50°	1503.8	17.5
50°-60°	1178.1	13.7
60°-70°	767.9	8.9
70°-80°	340.2	4.0
80°-90°	73.0	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°	3069.5	35.8
0°-40°	4717.9	55.0
0°-60°	7399.9	86.2
0°-90°	8581.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8581.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4371	4371	4371	4371	4371	
5°	4295	4290	4290	4285	4285	408
15°	4017	4017	3977	3936	3921	1129
25°	3482	3462	3406	3285	3194	1598
35°	2825	2804	2668	2466	2405	1766
45°	2168	2122	1940	1779	1708	1670
55°	1506	1460	1324	1167	1107	1351
65°	894	844	763	778	647	881
75°	359	334	313	298	328	385
85°	50	56	61	66	71	70
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4371.0	4371.0	4371.0	4371.0	4371.0
2.5°	4340.7	4340.7	4340.7	4335.7	4335.7
5°	4295.2	4290.2	4290.2	4285.1	4285.1
7.5°	4259.9	4254.8	4249.8	4244.7	4234.6
10°	4209.3	4209.3	4204.3	4179.0	4174.0
12.5°	4128.5	4123.4	4103.2	4067.9	4057.7
15°	4017.3	4017.3	3976.9	3936.5	3921.3
17.5°	3896.0	3891.0	3840.5	3800.0	3779.8
20°	3764.7	3754.6	3704.0	3638.3	3603.0
22.5°	3618.1	3618.1	3557.5	3471.6	3436.2
25°	3481.7	3461.5	3405.9	3284.6	3193.6
27.5°	3325.0	3294.7	3234.1	3062.3	2956.1
30°	3153.2	3138.1	3052.2	2829.8	2749.0
32.5°	2991.5	2966.2	2875.3	2642.8	2577.1
35°	2824.8	2804.5	2668.1	2466.0	2405.3
37.5°	2658.0	2632.7	2460.9	2299.2	2223.4
40°	2491.2	2460.9	2274.0	2127.4	2046.6
42.5°	2334.6	2294.2	2112.3	1955.6	1864.6
45°	2167.8	2122.4	1940.4	1778.7	1708.0
47.5°	2001.1	1960.7	1793.9	1627.1	1546.3
50°	1824.2	1788.8	1637.2	1470.5	1384.6
52.5°	1677.7	1622.1	1475.5	1308.8	1238.0
55°	1505.9	1460.4	1323.9	1167.3	1106.7
57.5°	1349.2	1303.7	1177.4	1030.9	980.3
60°	1202.7	1137.0	1030.9	904.5	864.1
62.5°	1041.0	990.4	899.5	793.4	843.9
65°	894.4	843.9	763.0	778.2	646.8
67.5°	732.7	707.5	636.7	566.0	545.7
70°	596.3	566.0	540.7	464.9	444.7
72.5°	475.0	444.7	409.3	368.9	353.7
75°	358.8	333.5	313.3	298.1	328.5
77.5°	247.6	237.5	222.3	207.2	202.1
80°	161.7	156.7	151.6	146.5	141.5
82.5°	96.0	96.0	96.0	96.0	96.0
85°	50.5	55.6	60.6	65.7	70.7
87.5°	30.3	30.3	35.4	40.4	45.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)