

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: P563258

Luminaire Tested: FSR-24-4-LD4-3LO-35-UNV-80-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P563258
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-35-UNV-80-94-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7332.0 lumens
Efficiency: N/A
Efficacy: 104.4 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

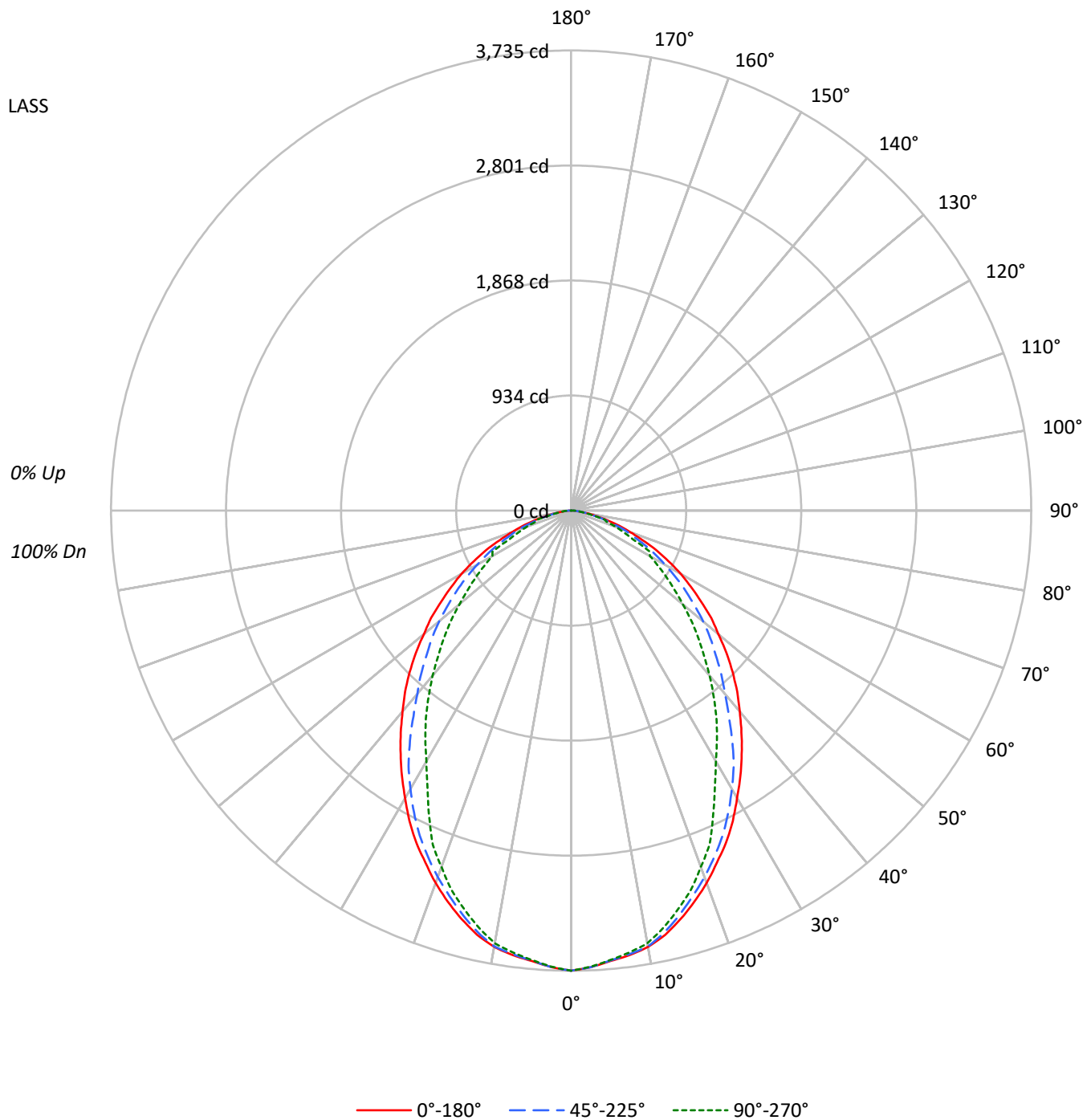
Input Watts (W): 70.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5025	5025	5025
5°	4957	4951	4945
10°	4914	4908	4873
15°	4781	4733	4667
20°	4606	4532	4408
25°	4416	4320	4051
30°	4186	4052	3649
35°	3964	3745	3376
40°	3739	3413	3071
45°	3525	3155	2777
50°	3263	2928	2476
55°	3018	2654	2218
60°	2765	2370	1987
65°	2433	2076	1760
70°	2004	1817	1495
75°	1594	1392	1459
80°	1071	1003	937
85°	667	800	932

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3525 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	347.7	4.7
10°-20°	954.1	13.0
20°-30°	1320.9	18.0
30°-40°	1408.5	19.2
40°-50°	1285.0	17.5
50°-60°	1006.7	13.7
60°-70°	656.1	8.9
70°-80°	290.7	4.0
80°-90°	62.4	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°	2622.7	35.8
0°-40°	4031.2	55.0
0°-60°	6322.8	86.2
0°-90°	7332.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7332.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3735	3735	3735	3735	3735	
5°	3670	3666	3666	3661	3661	348
15°	3433	3433	3398	3364	3350	965
25°	2975	2958	2910	2806	2729	1366
35°	2414	2396	2280	2107	2055	1509
45°	1852	1813	1658	1520	1459	1427
55°	1287	1248	1131	997	946	1154
65°	764	721	652	665	553	753
75°	307	285	268	255	281	329
85°	43	48	52	56	60	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3734.8	3734.8	3734.8	3734.8	3734.8
2.5°	3708.9	3708.9	3708.9	3704.6	3704.6
5°	3670.1	3665.7	3665.7	3661.4	3661.4
7.5°	3639.8	3635.5	3631.2	3626.9	3618.2
10°	3596.7	3596.7	3592.3	3570.7	3566.4
12.5°	3527.6	3523.3	3506.0	3475.8	3467.1
15°	3432.6	3432.6	3398.0	3363.5	3350.5
17.5°	3329.0	3324.6	3281.5	3246.9	3229.7
20°	3216.7	3208.1	3164.9	3108.8	3078.5
22.5°	3091.5	3091.5	3039.7	2966.3	2936.0
25°	2974.9	2957.6	2910.1	2806.5	2728.8
27.5°	2841.1	2815.1	2763.3	2616.5	2525.9
30°	2694.3	2681.3	2607.9	2417.9	2348.8
32.5°	2556.1	2534.5	2456.8	2258.2	2202.0
35°	2413.6	2396.3	2279.8	2107.0	2055.2
37.5°	2271.1	2249.5	2102.7	1964.6	1899.8
40°	2128.6	2102.7	1943.0	1817.8	1748.7
42.5°	1994.8	1960.2	1804.8	1671.0	1593.2
45°	1852.3	1813.4	1658.0	1519.8	1459.4
47.5°	1709.8	1675.3	1532.8	1390.3	1321.2
50°	1558.7	1528.5	1398.9	1256.5	1183.1
52.5°	1433.5	1386.0	1260.8	1118.3	1057.8
55°	1286.7	1247.8	1131.2	997.4	945.6
57.5°	1152.8	1114.0	1006.0	880.8	837.6
60°	1027.6	971.5	880.8	772.9	738.3
62.5°	889.4	846.3	768.6	677.9	721.1
65°	764.2	721.1	652.0	664.9	552.7
67.5°	626.1	604.5	544.0	483.6	466.3
70°	509.5	483.6	462.0	397.2	380.0
72.5°	405.9	380.0	349.7	315.2	302.2
75°	306.6	285.0	267.7	254.7	280.7
77.5°	211.6	202.9	190.0	177.0	172.7
80°	138.2	133.8	129.5	125.2	120.9
82.5°	82.0	82.0	82.0	82.0	82.0
85°	43.2	47.5	51.8	56.1	60.4
87.5°	25.9	25.9	30.2	34.5	38.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)