

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: P562234

Luminaire Tested: FSR-24-4-LD4-1LO-50-UNV-80-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562234
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-LD4-1LO-50-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 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2610.0 lumens
Efficiency: N/A
Efficacy: 111.5 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

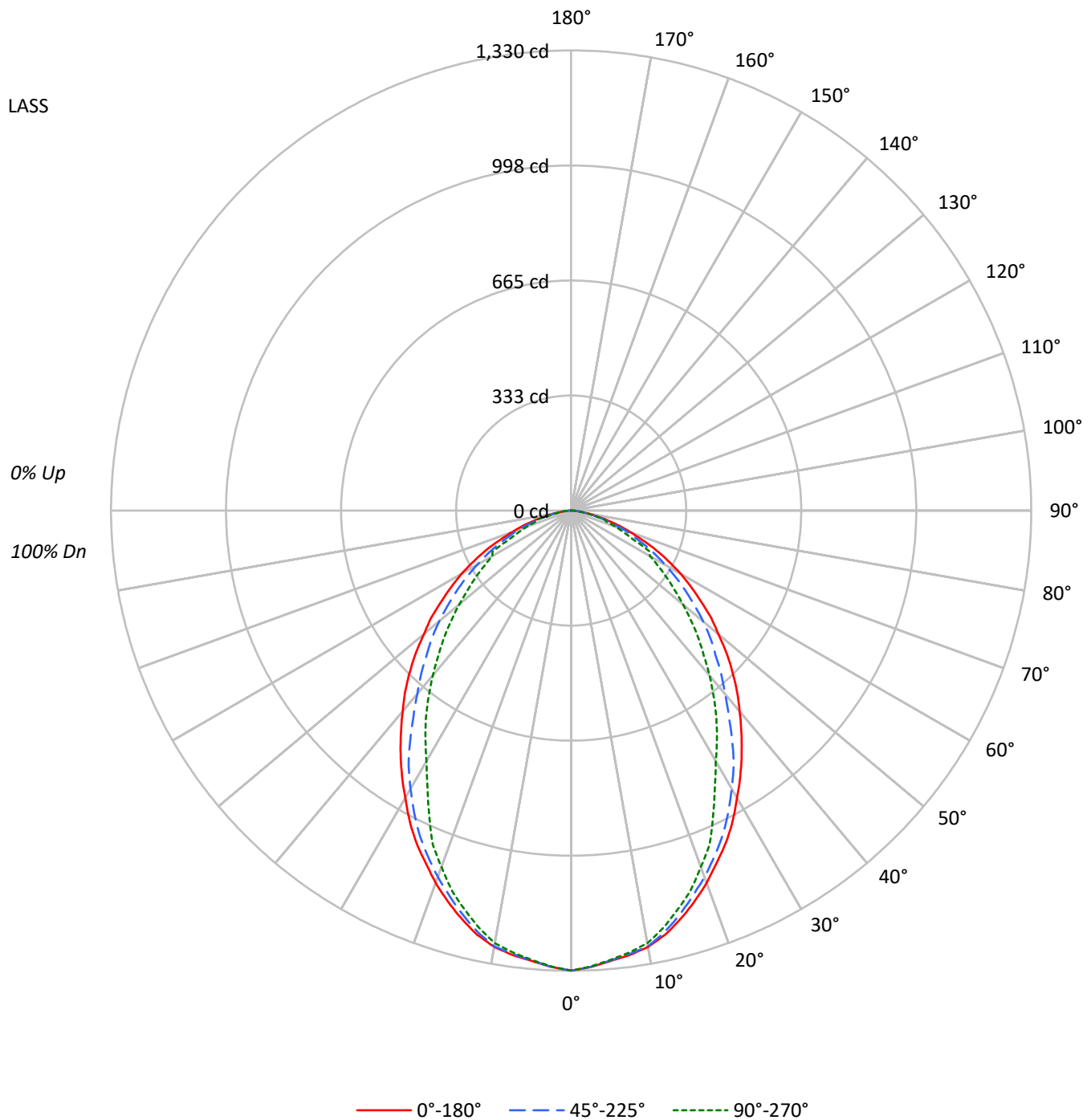
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1789	1789	1789
5°	1764	1762	1760
10°	1749	1747	1735
15°	1702	1685	1661
20°	1640	1613	1569
25°	1572	1538	1442
30°	1490	1442	1299
35°	1411	1333	1202
40°	1331	1215	1093
45°	1255	1123	989
50°	1162	1042	881
55°	1074	945	790
60°	984	844	707
65°	866	739	626
70°	714	647	532
75°	567	495	519
80°	381	357	333
85°	238	284	332

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1255 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.8	4.7
10°-20°	339.6	13.0
20°-30°	470.2	18.0
30°-40°	501.4	19.2
40°-50°	457.4	17.5
50°-60°	358.3	13.7
60°-70°	233.6	8.9
70°-80°	103.5	4.0
80°-90°	22.2	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°	933.6	35.8
0°-40°	1435.0	55.0
0°-60°	2250.7	86.2
0°-90°	2610.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2610.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1330	1330	1330	1330	1330	
5°	1306	1305	1305	1303	1303	124
15°	1222	1222	1210	1197	1193	344
25°	1059	1053	1036	999	971	486
35°	859	853	812	750	732	537
45°	659	646	590	541	520	508
55°	458	444	403	355	337	411
65°	272	257	232	237	197	268
75°	109	101	95	91	100	117
85°	15	17	18	20	22	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1329.5	1329.5	1329.5	1329.5	1329.5
2.5°	1320.3	1320.3	1320.3	1318.7	1318.7
5°	1306.4	1304.9	1304.9	1303.4	1303.4
7.5°	1295.7	1294.1	1292.6	1291.1	1288.0
10°	1280.3	1280.3	1278.8	1271.1	1269.6
12.5°	1255.7	1254.2	1248.0	1237.3	1234.2
15°	1221.9	1221.9	1209.6	1197.3	1192.7
17.5°	1185.0	1183.5	1168.1	1155.8	1149.7
20°	1145.1	1142.0	1126.6	1106.6	1095.9
22.5°	1100.5	1100.5	1082.0	1055.9	1045.2
25°	1059.0	1052.8	1035.9	999.0	971.4
27.5°	1011.3	1002.1	983.7	931.4	899.1
30°	959.1	954.5	928.3	860.7	836.1
32.5°	909.9	902.2	874.5	803.8	783.9
35°	859.2	853.0	811.5	750.1	731.6
37.5°	808.5	800.8	748.5	699.3	676.3
40°	757.7	748.5	691.6	647.1	622.5
42.5°	710.1	697.8	642.5	594.8	567.2
45°	659.4	645.5	590.2	541.0	519.5
47.5°	608.6	596.4	545.6	494.9	470.3
50°	554.9	544.1	498.0	447.3	421.1
52.5°	510.3	493.4	448.8	398.1	376.6
55°	458.0	444.2	402.7	355.0	336.6
57.5°	410.4	396.5	358.1	313.5	298.2
60°	365.8	345.8	313.5	275.1	262.8
62.5°	316.6	301.3	273.6	241.3	256.7
65°	272.0	256.7	232.1	236.7	196.7
67.5°	222.9	215.2	193.7	172.1	166.0
70°	181.4	172.1	164.5	141.4	135.3
72.5°	144.5	135.3	124.5	112.2	107.6
75°	109.1	101.4	95.3	90.7	99.9
77.5°	75.3	72.2	67.6	63.0	61.5
80°	49.2	47.6	46.1	44.6	43.0
82.5°	29.2	29.2	29.2	29.2	29.2
85°	15.4	16.9	18.4	20.0	21.5
87.5°	9.2	9.2	10.8	12.3	13.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)