

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: P560949

Luminaire Tested: FSR-12-4-LD4-1LO-35-UNV-80-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560949
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-12-4-LD4-1LO-35-UNV-80-86-EDD
Description: 1X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2404.0 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

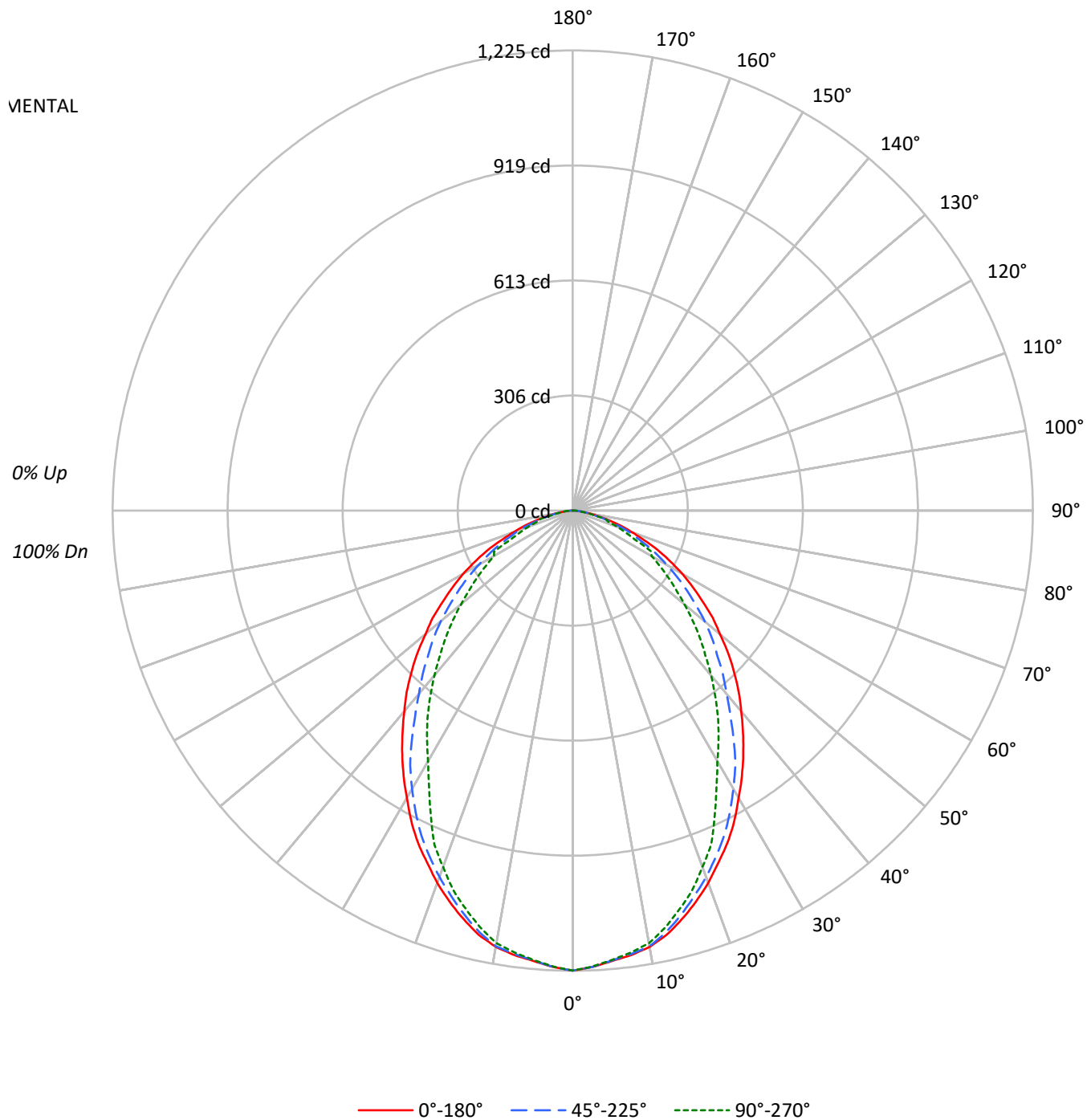
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					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		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°	3295	3295	3295
5°	3250	3247	3243
10°	3222	3218	3195
15°	3136	3104	3061
20°	3020	2972	2891
25°	2896	2833	2657
30°	2745	2657	2393
35°	2600	2456	2214
40°	2452	2238	2014
45°	2311	2069	1821
50°	2140	1920	1624
55°	1979	1740	1454
60°	1813	1554	1303
65°	1596	1361	1154
70°	1315	1192	980
75°	1045	913	957
80°	702	659	614
85°	438	525	611

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2311 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.0	4.7
10°-20°	312.8	13.0
20°-30°	433.1	18.0
30°-40°	461.8	19.2
40°-50°	421.3	17.5
50°-60°	330.1	13.7
60°-70°	215.1	8.9
70°-80°	95.3	4.0
80°-90°	20.5	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°	859.9	35.8
0°-40°	1321.7	55.0
0°-60°	2073.1	86.2
0°-90°	2404.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2404.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1225	1225	1225	1225	1225	
5°	1203	1202	1202	1200	1200	114
15°	1126	1126	1114	1103	1099	316
25°	975	970	954	920	895	448
35°	791	786	748	691	674	495
45°	607	595	544	498	478	468
55°	422	409	371	327	310	378
65°	251	236	214	218	181	247
75°	100	93	88	84	92	108
85°	14	16	17	18	20	20
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1224.6	1224.6	1224.6	1224.6	1224.6
2.5°	1216.1	1216.1	1216.1	1214.7	1214.7
5°	1203.3	1201.9	1201.9	1200.5	1200.5
7.5°	1193.4	1192.0	1190.6	1189.2	1186.3
10°	1179.3	1179.3	1177.8	1170.8	1169.4
12.5°	1156.6	1155.2	1149.5	1139.6	1136.8
15°	1125.5	1125.5	1114.1	1102.8	1098.6
17.5°	1091.5	1090.1	1075.9	1064.6	1058.9
20°	1054.7	1051.9	1037.7	1019.3	1009.4
22.5°	1013.6	1013.6	996.6	972.6	962.7
25°	975.4	969.7	954.2	920.2	894.7
27.5°	931.5	923.0	906.0	857.9	828.2
30°	883.4	879.1	855.1	792.8	770.1
32.5°	838.1	831.0	805.5	740.4	722.0
35°	791.4	785.7	747.5	690.9	673.9
37.5°	744.6	737.6	689.4	644.1	622.9
40°	697.9	689.4	637.1	596.0	573.4
42.5°	654.0	642.7	591.8	547.9	522.4
45°	607.3	594.6	543.6	498.3	478.5
47.5°	560.6	549.3	502.6	455.8	433.2
50°	511.1	501.2	458.7	412.0	387.9
52.5°	470.0	454.4	413.4	366.7	346.8
55°	421.9	409.1	370.9	327.0	310.0
57.5°	378.0	365.2	329.9	288.8	274.6
60°	336.9	318.5	288.8	253.4	242.1
62.5°	291.6	277.5	252.0	222.3	236.4
65°	250.6	236.4	213.8	218.0	181.2
67.5°	205.3	198.2	178.4	158.6	152.9
70°	167.1	158.6	151.5	130.2	124.6
72.5°	133.1	124.6	114.7	103.3	99.1
75°	100.5	93.4	87.8	83.5	92.0
77.5°	69.4	66.5	62.3	58.0	56.6
80°	45.3	43.9	42.5	41.1	39.6
82.5°	26.9	26.9	26.9	26.9	26.9
85°	14.2	15.6	17.0	18.4	19.8
87.5°	8.5	8.5	9.9	11.3	12.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)