

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: P560997

Luminaire Tested: FSR-12-4-LD4-1LO-35-UNV-93-86-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560997
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-93-86-EDD
Description: 1X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS 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: 2408.0 lumens
Efficiency: N/A
Efficacy: 102.9 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

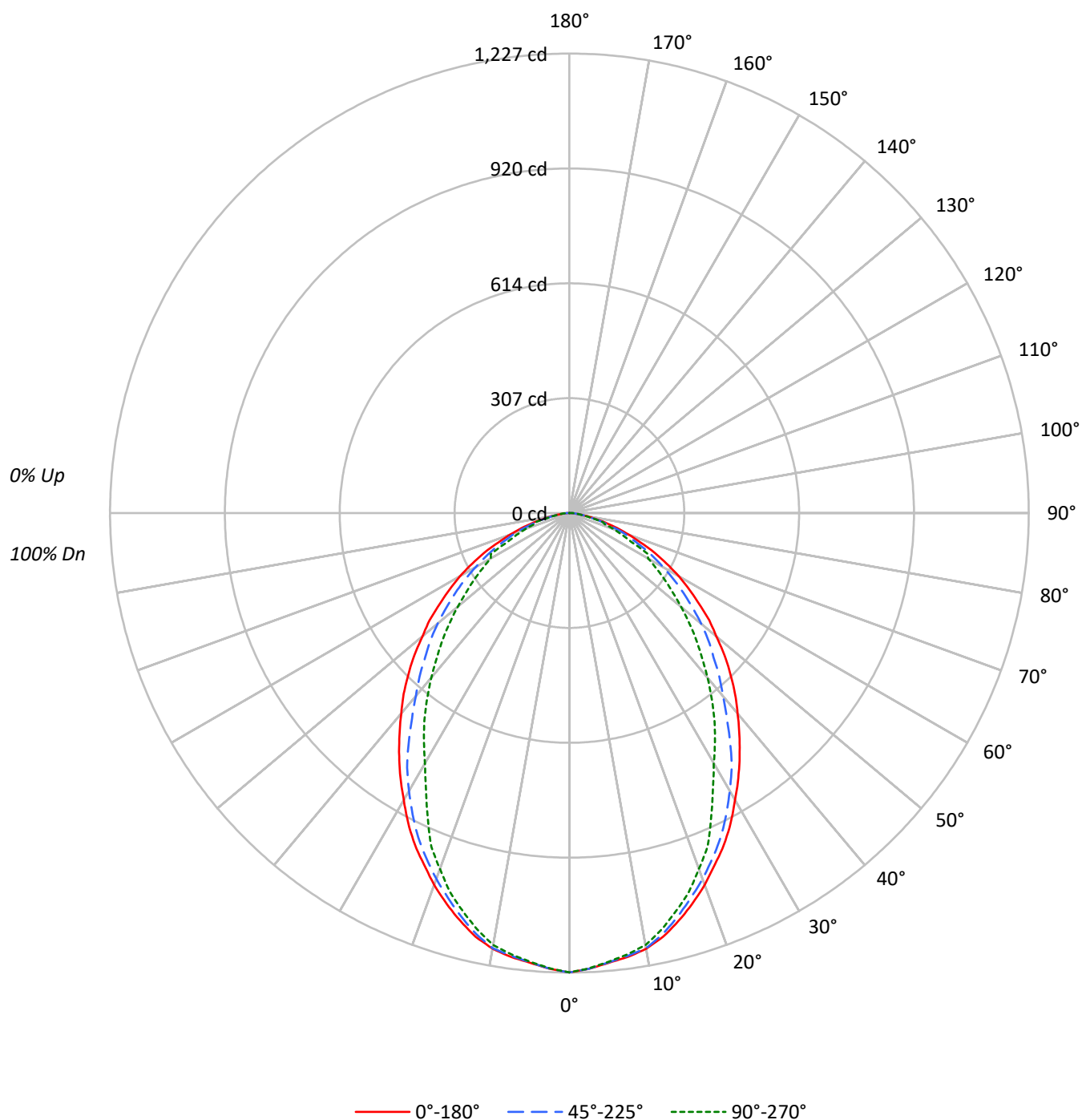
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	99	108	104	100	97	100	97	94		96	94	91		92
2	101	94	88	83	99	92	87	82	89	84	80		86	82	78		83
3	93	84	77	71	91	82	76	70	79	74	69		77	72	68		74
4	86	75	67	61	84	74	66	61	72	65	60		69	64	59		67
5	80	68	60	54	78	67	59	53	65	58	53		63	57	52		61
6	74	62	53	48	72	61	53	47	59	52	47		57	51	47		56
7	69	56	48	43	67	56	48	42	54	47	42		53	46	42		51
8	65	52	44	38	63	51	44	38	50	43	38		49	42	38		48
9	61	48	40	35	59	47	40	35	46	39	35		45	39	34		44
10	57	44	37	32	56	44	37	32	43	36	32		42	36	32		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3301	3301	3301
5°	3256	3252	3248
10°	3228	3224	3201
15°	3141	3109	3066
20°	3025	2977	2895
25°	2901	2838	2661
30°	2750	2661	2397
35°	2604	2460	2217
40°	2456	2242	2017
45°	2315	2072	1824
50°	2143	1923	1626
55°	1983	1743	1457
60°	1816	1557	1305
65°	1598	1363	1156
70°	1316	1194	982
75°	1047	914	959
80°	704	659	615
85°	438	525	614

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2315 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.2	4.7
10°-20°	313.4	13.0
20°-30°	433.8	18.0
30°-40°	462.6	19.2
40°-50°	422.0	17.5
50°-60°	330.6	13.7
60°-70°	215.5	8.9
70°-80°	95.5	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°	861.4	35.8
0°-40°	1323.9	55.0
0°-60°	2076.6	86.2
0°-90°	2408.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2408.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1227	1227	1227	1227	1227	
5°	1205	1204	1204	1202	1202	114
15°	1127	1127	1116	1105	1100	317
25°	977	971	956	922	896	449
35°	793	787	749	692	675	496
45°	608	596	544	499	479	469
55°	423	410	372	328	311	379
65°	251	237	214	218	182	247
75°	101	94	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°	1226.6	1226.6	1226.6	1226.6	1226.6
2.5°	1218.1	1218.1	1218.1	1216.7	1216.7
5°	1205.3	1203.9	1203.9	1202.5	1202.5
7.5°	1195.4	1194.0	1192.6	1191.2	1188.3
10°	1181.2	1181.2	1179.8	1172.7	1171.3
12.5°	1158.5	1157.1	1151.4	1141.5	1138.7
15°	1127.3	1127.3	1116.0	1104.7	1100.4
17.5°	1093.3	1091.9	1077.7	1066.4	1060.7
20°	1056.4	1053.6	1039.4	1021.0	1011.1
22.5°	1015.3	1015.3	998.3	974.2	964.3
25°	977.0	971.4	955.8	921.7	896.2
27.5°	933.1	924.6	907.5	859.3	829.6
30°	884.9	880.6	856.5	794.1	771.4
32.5°	839.5	832.4	806.9	741.6	723.2
35°	792.7	787.0	748.7	692.0	675.0
37.5°	745.9	738.8	690.6	645.2	623.9
40°	699.1	690.6	638.1	597.0	574.3
42.5°	655.1	643.8	592.7	548.8	523.3
45°	608.3	595.6	544.5	499.1	479.3
47.5°	561.5	550.2	503.4	456.6	433.9
50°	511.9	502.0	459.4	412.6	388.5
52.5°	470.8	455.2	414.1	367.3	347.4
55°	422.6	409.8	371.5	327.6	310.6
57.5°	378.6	365.9	330.4	289.3	275.1
60°	337.5	319.1	289.3	253.8	242.5
62.5°	292.1	277.9	252.4	222.6	236.8
65°	251.0	236.8	214.1	218.4	181.5
67.5°	205.6	198.5	178.7	158.8	153.1
70°	167.3	158.8	151.7	130.5	124.8
72.5°	133.3	124.8	114.9	103.5	99.3
75°	100.7	93.6	87.9	83.7	92.2
77.5°	69.5	66.6	62.4	58.1	56.7
80°	45.4	44.0	42.5	41.1	39.7
82.5°	26.9	26.9	26.9	26.9	26.9
85°	14.2	15.6	17.0	18.4	19.9
87.5°	8.5	8.5	9.9	11.3	12.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)