

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: P561948

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-82-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561948
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-24-2-LD4-1LO-35-UNV-82-96-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2248.0 lumens
Efficiency: N/A
Efficacy: 96.1 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

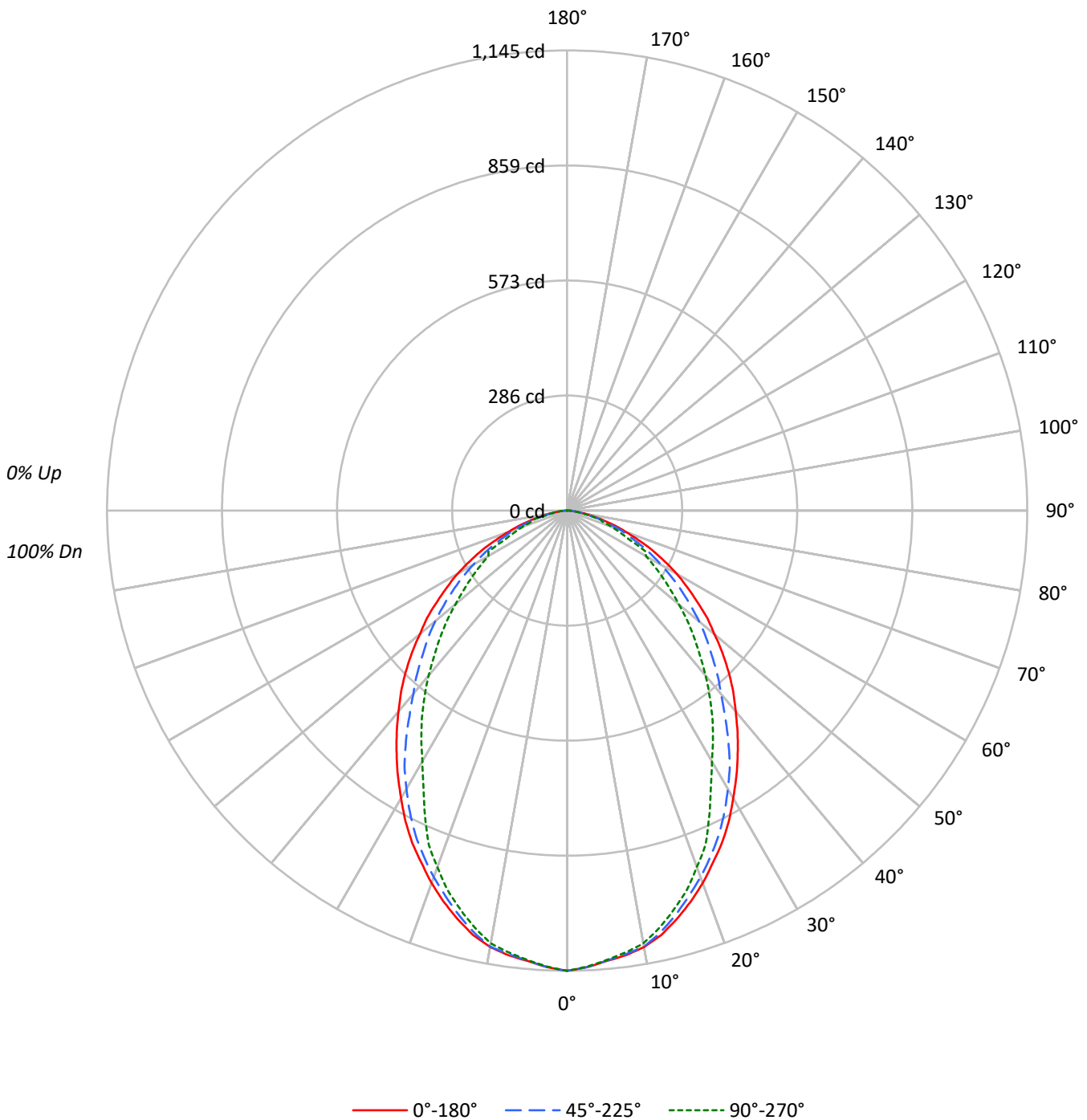
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1541	1541	1541
5°	1520	1518	1516
10°	1507	1505	1494
15°	1466	1451	1431
20°	1412	1389	1352
25°	1354	1325	1242
30°	1283	1242	1119
35°	1215	1148	1035
40°	1146	1046	942
45°	1081	967	851
50°	1000	898	759
55°	925	814	680
60°	848	727	609
65°	746	636	539
70°	614	557	458
75°	489	427	447
80°	329	308	287
85°	204	245	286

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1081 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.6	4.7
10°-20°	292.5	13.0
20°-30°	405.0	18.0
30°-40°	431.8	19.2
40°-50°	394.0	17.5
50°-60°	308.6	13.7
60°-70°	201.2	8.9
70°-80°	89.1	4.0
80°-90°	19.1	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°	804.1	35.8
0°-40°	1236.0	55.0
0°-60°	1938.6	86.2
0°-90°	2248.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2248.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1145	1145	1145	1145	1145	
5°	1125	1124	1124	1123	1123	107
15°	1052	1052	1042	1031	1027	296
25°	912	907	892	860	837	419
35°	740	735	699	646	630	463
45°	568	556	508	466	447	437
55°	394	383	347	306	290	354
65°	234	221	200	204	169	231
75°	94	87	82	78	86	101
85°	13	15	16	17	18	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1145.1	1145.1	1145.1	1145.1	1145.1
2.5°	1137.2	1137.2	1137.2	1135.8	1135.8
5°	1125.2	1123.9	1123.9	1122.6	1122.6
7.5°	1116.0	1114.7	1113.3	1112.0	1109.4
10°	1102.7	1102.7	1101.4	1094.8	1093.5
12.5°	1081.6	1080.2	1074.9	1065.7	1063.0
15°	1052.4	1052.4	1041.8	1031.3	1027.3
17.5°	1020.7	1019.3	1006.1	995.5	990.2
20°	986.2	983.6	970.4	953.1	943.9
22.5°	947.9	947.9	932.0	909.5	900.2
25°	912.1	906.8	892.3	860.5	836.7
27.5°	871.1	863.1	847.2	802.2	774.4
30°	826.1	822.1	799.6	741.3	720.2
32.5°	783.7	777.1	753.3	692.4	675.1
35°	740.0	734.7	699.0	646.0	630.1
37.5°	696.3	689.7	644.7	602.3	582.5
40°	652.6	644.7	595.7	557.3	536.1
42.5°	611.6	601.0	553.4	512.3	488.5
45°	567.9	556.0	508.3	466.0	447.4
47.5°	524.2	513.6	470.0	426.3	405.1
50°	477.9	468.6	428.9	385.2	362.7
52.5°	439.5	424.9	386.6	342.9	324.3
55°	394.5	382.6	346.8	305.8	289.9
57.5°	353.5	341.5	308.4	270.1	256.8
60°	315.1	297.9	270.1	237.0	226.4
62.5°	272.7	259.5	235.6	207.8	221.1
65°	234.3	221.1	199.9	203.9	169.4
67.5°	192.0	185.3	166.8	148.3	143.0
70°	156.2	148.3	141.6	121.8	116.5
72.5°	124.4	116.5	107.2	96.6	92.7
75°	94.0	87.4	82.1	78.1	86.0
77.5°	64.9	62.2	58.2	54.3	53.0
80°	42.4	41.0	39.7	38.4	37.1
82.5°	25.2	25.2	25.2	25.2	25.2
85°	13.2	14.6	15.9	17.2	18.5
87.5°	7.9	7.9	9.3	10.6	11.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)