

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: P562205

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562205
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-40-UNV-82-96-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2713.0 lumens
Efficiency: N/A
Efficacy: 115.9 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

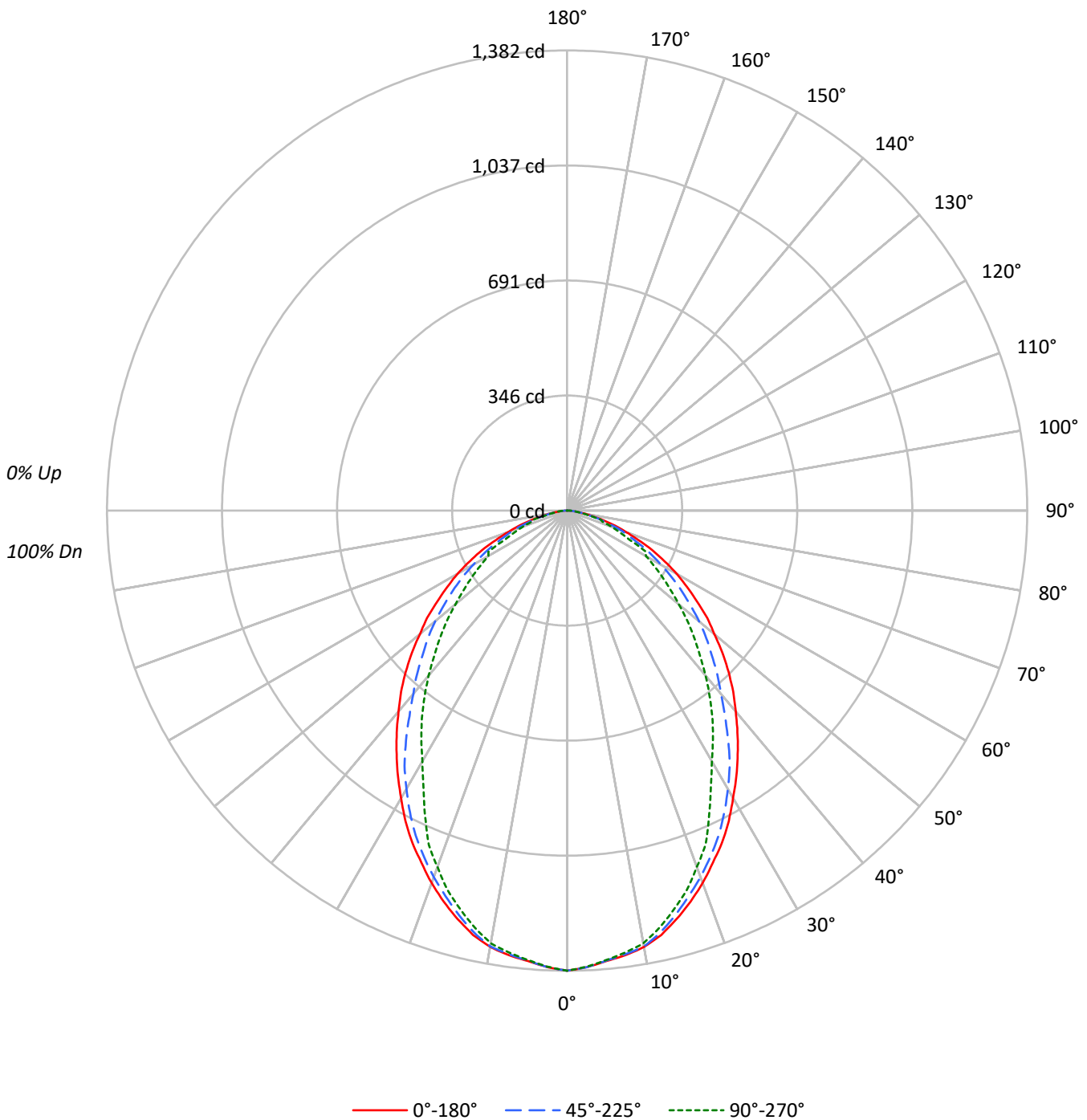
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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				
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°	1859	1859	1859
5°	1834	1832	1830
10°	1818	1816	1803
15°	1769	1751	1727
20°	1704	1677	1631
25°	1634	1599	1499
30°	1549	1499	1350
35°	1467	1386	1249
40°	1383	1263	1136
45°	1304	1167	1028
50°	1207	1083	916
55°	1117	982	821
60°	1023	877	735
65°	900	768	651
70°	742	672	553
75°	590	515	540
80°	396	371	346
85°	247	296	346

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1304 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.6	4.7
10°-20°	353.0	13.0
20°-30°	488.8	18.0
30°-40°	521.2	19.2
40°-50°	475.5	17.5
50°-60°	372.5	13.7
60°-70°	242.8	8.9
70°-80°	107.5	4.0
80°-90°	23.1	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°	970.5	35.8
0°-40°	1491.6	55.0
0°-60°	2339.6	86.2
0°-90°	2713.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2713.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1382	1382	1382	1382	1382	
5°	1358	1356	1356	1355	1355	129
15°	1270	1270	1257	1245	1240	357
25°	1101	1094	1077	1038	1010	505
35°	893	887	844	780	760	558
45°	685	671	614	562	540	528
55°	476	462	419	369	350	427
65°	283	267	241	246	204	279
75°	113	105	99	94	104	122
85°	16	18	19	21	22	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1382.0	1382.0	1382.0	1382.0	1382.0
2.5°	1372.4	1372.4	1372.4	1370.8	1370.8
5°	1358.0	1356.4	1356.4	1354.8	1354.8
7.5°	1346.8	1345.2	1343.6	1342.0	1338.8
10°	1330.8	1330.8	1329.2	1321.3	1319.7
12.5°	1305.3	1303.7	1297.3	1286.1	1282.9
15°	1270.1	1270.1	1257.3	1244.6	1239.8
17.5°	1231.8	1230.2	1214.2	1201.4	1195.0
20°	1190.2	1187.1	1171.1	1150.3	1139.1
22.5°	1143.9	1143.9	1124.7	1097.6	1086.4
25°	1100.8	1094.4	1076.8	1038.5	1009.7
27.5°	1051.3	1041.7	1022.5	968.2	934.6
30°	996.9	992.1	965.0	894.7	869.1
32.5°	945.8	937.8	909.1	835.6	814.8
35°	893.1	886.7	843.6	779.7	760.5
37.5°	840.4	832.4	778.1	726.9	703.0
40°	787.6	778.1	718.9	672.6	647.0
42.5°	738.1	725.3	667.8	618.3	589.5
45°	685.4	671.0	613.5	562.4	540.0
47.5°	632.7	619.9	567.2	514.4	488.9
50°	576.8	565.6	517.6	464.9	437.8
52.5°	530.4	512.8	466.5	413.8	391.4
55°	476.1	461.7	418.6	369.1	349.9
57.5°	426.6	412.2	372.3	325.9	309.9
60°	380.2	359.5	325.9	286.0	273.2
62.5°	329.1	313.1	284.4	250.8	266.8
65°	282.8	266.8	241.2	246.0	204.5
67.5°	231.7	223.7	201.3	178.9	172.5
70°	188.5	178.9	170.9	147.0	140.6
72.5°	150.2	140.6	129.4	116.6	111.8
75°	113.4	105.4	99.1	94.3	103.8
77.5°	78.3	75.1	70.3	65.5	63.9
80°	51.1	49.5	47.9	46.3	44.7
82.5°	30.4	30.4	30.4	30.4	30.4
85°	16.0	17.6	19.2	20.8	22.4
87.5°	9.6	9.6	11.2	12.8	14.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)