

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: P562191

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-81-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562191
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-81-97-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 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: 2672.0 lumens
Efficiency: N/A
Efficacy: 114.2 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

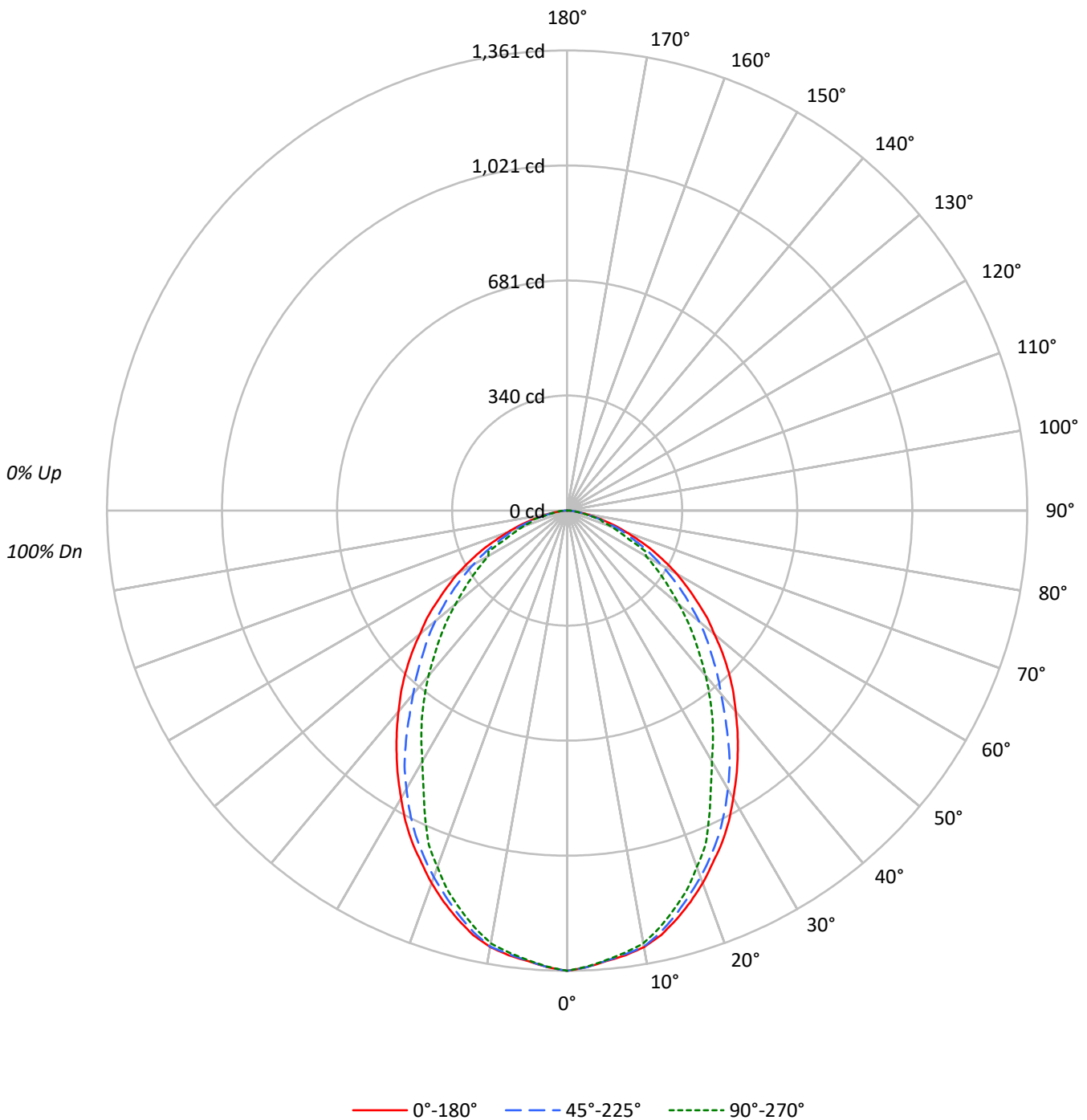
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1831	1831	1831
5°	1806	1804	1802
10°	1791	1789	1776
15°	1742	1725	1701
20°	1679	1651	1606
25°	1609	1574	1476
30°	1526	1477	1330
35°	1445	1365	1230
40°	1362	1244	1119
45°	1284	1150	1012
50°	1189	1067	902
55°	1100	967	808
60°	1008	864	724
65°	887	756	641
70°	731	662	545
75°	581	507	532
80°	391	366	342
85°	242	292	340

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1284 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.7	4.7
10°-20°	347.7	13.0
20°-30°	481.4	18.0
30°-40°	513.3	19.2
40°-50°	468.3	17.5
50°-60°	366.9	13.7
60°-70°	239.1	8.9
70°-80°	105.9	4.0
80°-90°	22.7	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°	955.8	35.8
0°-40°	1469.1	55.0
0°-60°	2304.2	86.2
0°-90°	2672.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2672.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1361	1361	1361	1361	1361	
5°	1338	1336	1336	1334	1334	127
15°	1251	1251	1238	1226	1221	352
25°	1084	1078	1060	1023	994	498
35°	880	873	831	768	749	550
45°	675	661	604	554	532	520
55°	469	455	412	364	345	421
65°	278	263	238	242	201	274
75°	112	104	98	93	102	120
85°	16	17	19	20	22	22
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1361.1	1361.1	1361.1	1361.1	1361.1
2.5°	1351.6	1351.6	1351.6	1350.1	1350.1
5°	1337.5	1335.9	1335.9	1334.3	1334.3
7.5°	1326.5	1324.9	1323.3	1321.7	1318.6
10°	1310.7	1310.7	1309.2	1301.3	1299.7
12.5°	1285.6	1284.0	1277.7	1266.7	1263.5
15°	1250.9	1250.9	1238.3	1225.8	1221.0
17.5°	1213.2	1211.6	1195.9	1183.3	1177.0
20°	1172.3	1169.1	1153.4	1132.9	1121.9
22.5°	1126.6	1126.6	1107.7	1081.0	1070.0
25°	1084.1	1077.9	1060.5	1022.8	994.5
27.5°	1035.4	1025.9	1007.0	953.5	920.5
30°	981.9	977.1	950.4	881.2	856.0
32.5°	931.5	923.6	895.3	822.9	802.5
35°	879.6	873.3	830.8	767.9	749.0
37.5°	827.7	819.8	766.3	715.9	692.3
40°	775.7	766.3	708.1	662.4	637.3
42.5°	727.0	714.4	657.7	608.9	580.6
45°	675.0	660.9	604.2	553.9	531.8
47.5°	623.1	610.5	558.6	506.7	481.5
50°	568.0	557.0	509.8	457.9	431.1
52.5°	522.4	505.1	459.5	407.5	385.5
55°	468.9	454.7	412.3	363.5	344.6
57.5°	420.1	406.0	366.6	321.0	305.3
60°	374.5	354.0	321.0	281.7	269.1
62.5°	324.1	308.4	280.1	247.0	262.8
65°	278.5	262.8	237.6	242.3	201.4
67.5°	228.2	220.3	198.3	176.2	169.9
70°	185.7	176.2	168.4	144.8	138.5
72.5°	147.9	138.5	127.5	114.9	110.1
75°	111.7	103.9	97.6	92.8	102.3
77.5°	77.1	74.0	69.2	64.5	62.9
80°	50.4	48.8	47.2	45.6	44.1
82.5°	29.9	29.9	29.9	29.9	29.9
85°	15.7	17.3	18.9	20.5	22.0
87.5°	9.4	9.4	11.0	12.6	14.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)