

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: P562215

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-93-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562215
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-93-87-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2765.0 lumens
Efficiency: N/A
Efficacy: 118.2 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

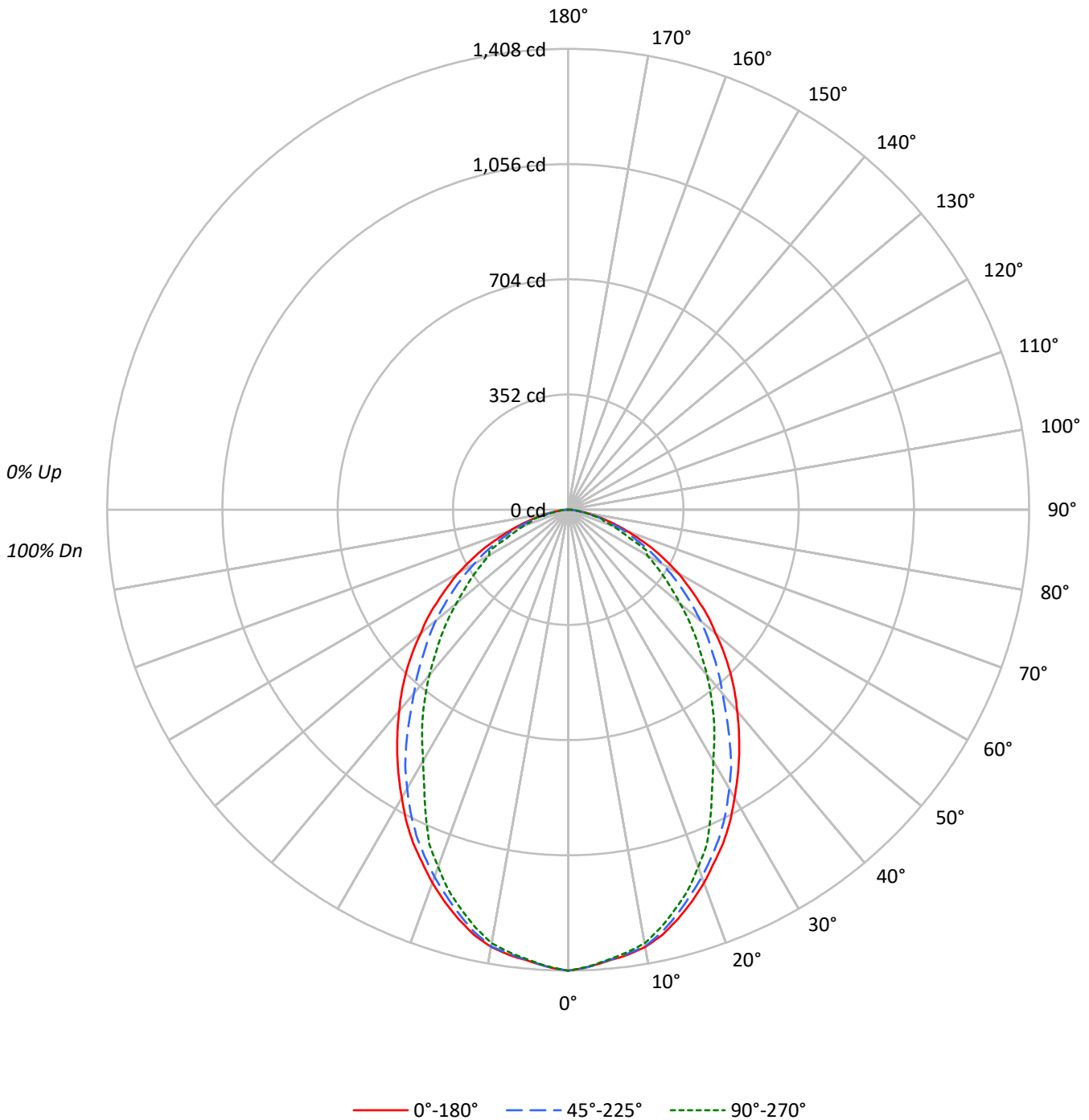
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P562215

CATALOG NUMBER: FSR-24-4-LD4-1LO-40-UNV-93-87-EDD

Luminous Intensity Polar Plot





TEST NUMBER: P562215

CATALOG NUMBER: FSR-24-4-LD4-1LO-40-UNV-93-87-EDD

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°	1895	1895	1895
5°	1869	1867	1865
10°	1853	1851	1838
15°	1803	1785	1760
20°	1737	1709	1662
25°	1666	1629	1528
30°	1578	1528	1376
35°	1495	1412	1273
40°	1410	1287	1158
45°	1329	1190	1047
50°	1230	1104	934
55°	1138	1001	837
60°	1043	894	749
65°	918	783	663
70°	756	685	564
75°	601	525	550
80°	404	378	353
85°	252	301	352

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1329 cd/sqm

TEST NUMBER: P562215

CATALOG NUMBER: FSR-24-4-LD4-1LO-40-UNV-93-87-EDD

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.1	4.7
10°-20°	359.8	13.0
20°-30°	498.1	18.0
30°-40°	531.2	19.2
40°-50°	484.6	17.5
50°-60°	379.6	13.7
60°-70°	247.4	8.9
70°-80°	109.6	4.0
80°-90°	23.5	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°	989.1	35.8
0°-40°	1520.2	55.0
0°-60°	2384.4	86.2
0°-90°	2765.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2765.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1408	1408	1408	1408	1408	
5°	1384	1382	1382	1381	1381	131
15°	1294	1294	1281	1268	1264	364
25°	1122	1115	1098	1058	1029	515
35°	910	904	860	795	775	569
45°	698	684	625	573	550	538
55°	485	471	427	376	357	435
65°	288	272	246	251	208	284
75°	116	108	101	96	106	124
85°	16	18	20	21	23	23
90°	0	0	0	0	0	



TEST NUMBER: P562215

CATALOG NUMBER: FSR-24-4-LD4-1LO-40-UNV-93-87-EDD

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1408.5	1408.5	1408.5	1408.5	1408.5
2.5°	1398.7	1398.7	1398.7	1397.1	1397.1
5°	1384.0	1382.4	1382.4	1380.8	1380.8
7.5°	1372.6	1371.0	1369.4	1367.7	1364.5
10°	1356.3	1356.3	1354.7	1346.6	1345.0
12.5°	1330.3	1328.7	1322.2	1310.8	1307.5
15°	1294.5	1294.5	1281.4	1268.4	1263.5
17.5°	1255.4	1253.8	1237.5	1224.5	1217.9
20°	1213.1	1209.8	1193.5	1172.4	1161.0
22.5°	1165.8	1165.8	1146.3	1118.6	1107.2
25°	1121.9	1115.4	1097.5	1058.4	1029.1
27.5°	1071.4	1061.6	1042.1	986.7	952.5
30°	1016.0	1011.2	983.5	911.8	885.8
32.5°	963.9	955.8	926.5	851.6	830.4
35°	910.2	903.7	859.7	794.6	775.1
37.5°	856.5	848.3	793.0	740.9	716.4
40°	802.7	793.0	732.7	685.5	659.4
42.5°	752.3	739.2	680.6	630.1	600.8
45°	698.5	683.9	625.3	573.2	550.4
47.5°	644.8	631.8	578.0	524.3	498.3
50°	587.8	576.4	527.6	473.8	446.1
52.5°	540.6	522.7	475.5	421.7	398.9
55°	485.2	470.6	426.6	376.1	356.6
57.5°	434.7	420.1	379.4	332.2	315.9
60°	387.5	366.4	332.2	291.5	278.4
62.5°	335.4	319.1	289.8	255.6	271.9
65°	288.2	271.9	245.9	250.8	208.4
67.5°	236.1	228.0	205.2	182.4	175.9
70°	192.1	182.4	174.2	149.8	143.3
72.5°	153.1	143.3	131.9	118.9	114.0
75°	115.6	107.5	101.0	96.1	105.8
77.5°	79.8	76.5	71.6	66.8	65.1
80°	52.1	50.5	48.8	47.2	45.6
82.5°	30.9	30.9	30.9	30.9	30.9
85°	16.3	17.9	19.5	21.2	22.8
87.5°	9.8	9.8	11.4	13.0	14.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)