

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: P562173

Luminaire Tested: FSR-24-4-LD4-1LO-40-UNV-80-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562173
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-80-96-EDD
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2917.0 lumens
Efficiency: N/A
Efficacy: 124.7 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

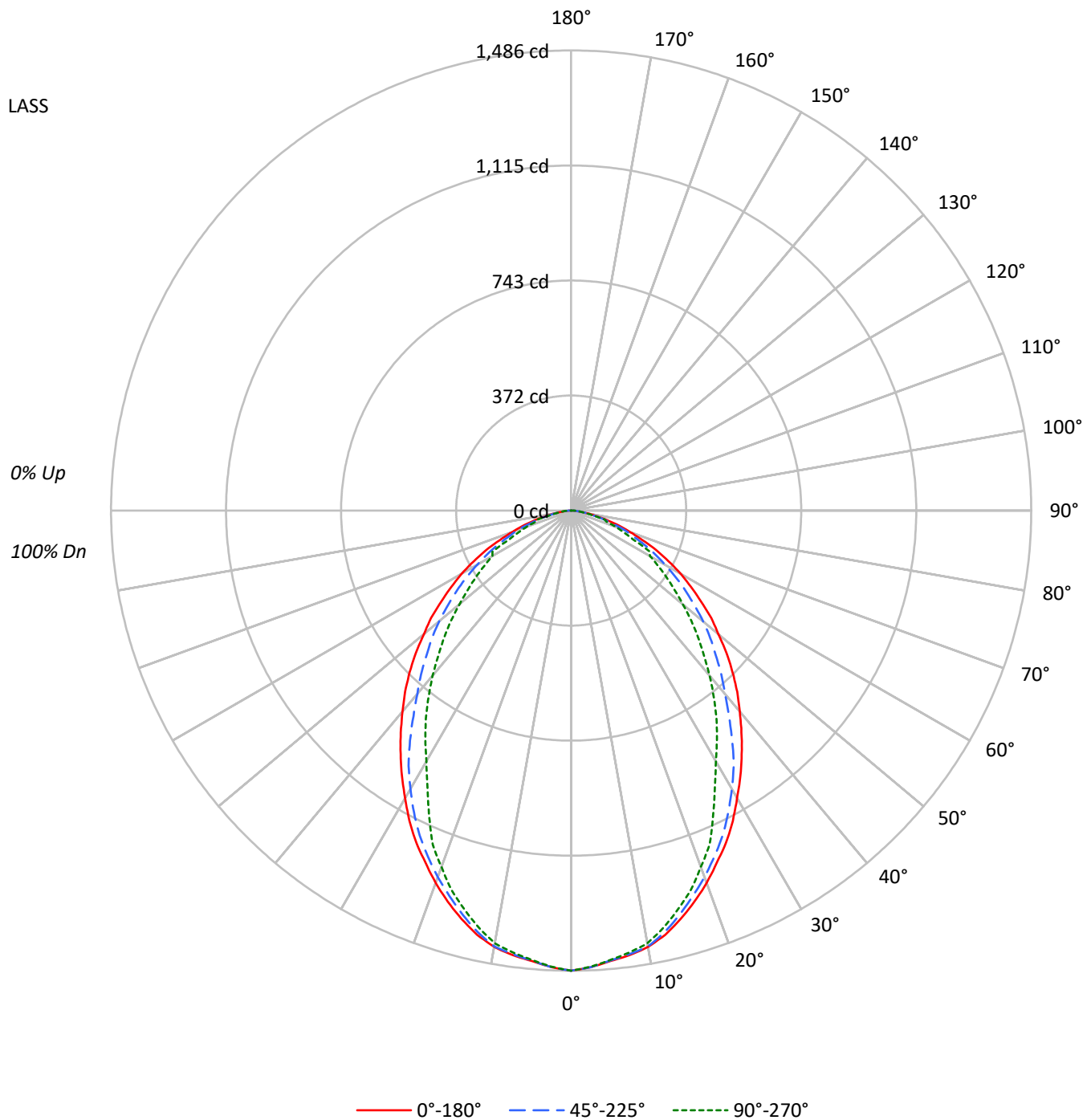
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1999	1999	1999
5°	1972	1970	1967
10°	1955	1953	1939
15°	1902	1883	1857
20°	1832	1803	1754
25°	1757	1719	1612
30°	1665	1612	1452
35°	1577	1490	1343
40°	1488	1358	1222
45°	1402	1255	1105
50°	1298	1165	985
55°	1201	1056	882
60°	1100	943	790
65°	968	826	700
70°	797	723	595
75°	634	554	581
80°	426	399	373
85°	266	318	371

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1402 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.3	4.7
10°-20°	379.6	13.0
20°-30°	525.5	18.0
30°-40°	560.4	19.2
40°-50°	511.2	17.5
50°-60°	400.5	13.7
60°-70°	261.0	8.9
70°-80°	115.6	4.0
80°-90°	24.8	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°	1043.4	35.8
0°-40°	1603.8	55.0
0°-60°	2515.5	86.2
0°-90°	2917.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2917.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1486	1486	1486	1486	1486	
5°	1460	1458	1458	1457	1457	139
15°	1366	1366	1352	1338	1333	384
25°	1184	1177	1158	1117	1086	543
35°	960	953	907	838	818	600
45°	737	722	660	605	581	568
55°	512	496	450	397	376	459
65°	304	287	259	264	220	300
75°	122	113	106	101	112	131
85°	17	19	21	22	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1485.9	1485.9	1485.9	1485.9	1485.9
2.5°	1475.6	1475.6	1475.6	1473.9	1473.9
5°	1460.1	1458.4	1458.4	1456.7	1456.7
7.5°	1448.1	1446.4	1444.7	1442.9	1439.5
10°	1430.9	1430.9	1429.2	1420.6	1418.9
12.5°	1403.4	1401.7	1394.8	1382.8	1379.4
15°	1365.6	1365.6	1351.9	1338.2	1333.0
17.5°	1324.4	1322.7	1305.5	1291.8	1284.9
20°	1279.7	1276.3	1259.1	1236.8	1224.8
22.5°	1229.9	1229.9	1209.3	1180.1	1168.1
25°	1183.6	1176.7	1157.8	1116.6	1085.6
27.5°	1130.3	1120.0	1099.4	1041.0	1004.9
30°	1071.9	1066.7	1037.5	962.0	934.5
32.5°	1016.9	1008.3	977.4	898.4	876.1
35°	960.2	953.4	907.0	838.3	817.7
37.5°	903.6	895.0	836.6	781.6	755.8
40°	846.9	836.6	773.0	723.2	695.7
42.5°	793.6	779.9	718.0	664.8	633.9
45°	736.9	721.5	659.6	604.7	580.6
47.5°	680.2	666.5	609.8	553.1	525.6
50°	620.1	608.1	556.6	499.9	470.7
52.5°	570.3	551.4	501.6	444.9	420.9
55°	511.9	496.4	450.1	396.8	376.2
57.5°	458.6	443.2	400.2	350.4	333.2
60°	408.8	386.5	350.4	307.5	293.7
62.5°	353.9	336.7	305.8	269.7	286.9
65°	304.0	286.9	259.4	264.5	219.9
67.5°	249.1	240.5	216.4	192.4	185.5
70°	202.7	192.4	183.8	158.0	151.2
72.5°	161.5	151.2	139.1	125.4	120.2
75°	122.0	113.4	106.5	101.3	111.7
77.5°	84.2	80.7	75.6	70.4	68.7
80°	55.0	53.3	51.5	49.8	48.1
82.5°	32.6	32.6	32.6	32.6	32.6
85°	17.2	18.9	20.6	22.3	24.0
87.5°	10.3	10.3	12.0	13.7	15.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)