

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: P560332

Luminaire Tested: FSR-12-2-LD4-2HI-50-UNV-81-96-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560332
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-12-2-LD4-2HI-50-UNV-81-96-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3149.0 lumens
Efficiency: N/A
Efficacy: 72.9 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

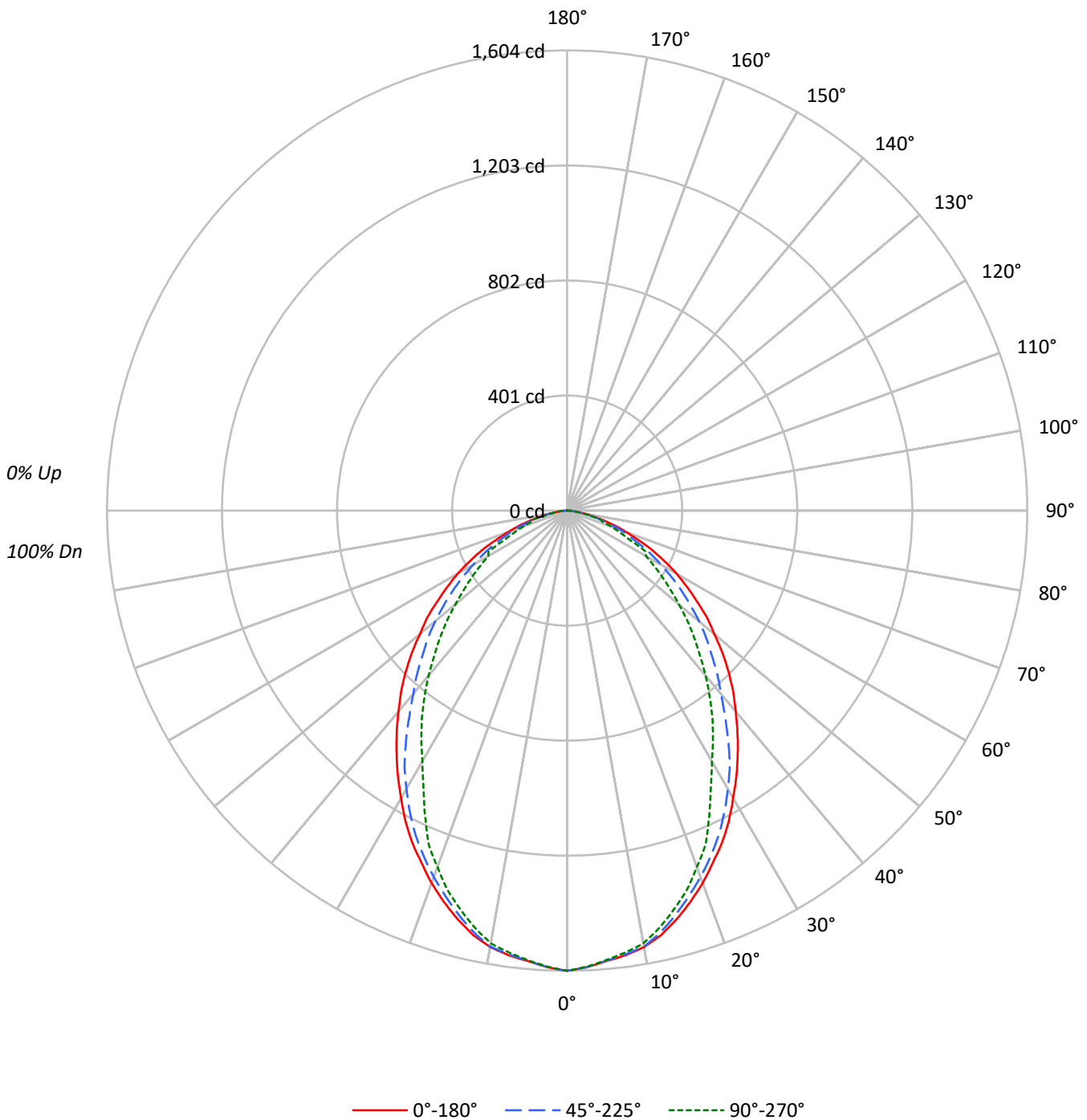
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	8633	8633	8633
5°	8515	8506	8495
10°	8442	8432	8371
15°	8215	8132	8018
20°	7912	7785	7573
25°	7587	7422	6960
30°	7191	6961	6269
35°	6811	6433	5799
40°	6423	5863	5276
45°	6055	5420	4771
50°	5605	5030	4254
55°	5185	4559	3810
60°	4750	4072	3413
65°	4180	3566	3023
70°	3443	3122	2568
75°	2739	2391	2506
80°	1838	1723	1609
85°	1142	1377	1606

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6055 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.3	4.7
10°-20°	409.8	13.0
20°-30°	567.3	18.0
30°-40°	604.9	19.2
40°-50°	551.9	17.5
50°-60°	432.3	13.7
60°-70°	281.8	8.9
70°-80°	124.8	4.0
80°-90°	26.8	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°	1126.4	35.8
0°-40°	1731.4	55.0
0°-60°	2715.6	86.2
0°-90°	3149.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3149.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1604	1604	1604	1604	1604	
5°	1576	1574	1574	1572	1572	150
15°	1474	1474	1459	1445	1439	414
25°	1278	1270	1250	1205	1172	587
35°	1037	1029	979	905	883	648
45°	796	779	712	653	627	613
55°	553	536	486	428	406	496
65°	328	310	280	286	237	323
75°	132	122	115	109	120	141
85°	18	20	22	24	26	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1604.1	1604.1	1604.1	1604.1	1604.1
2.5°	1592.9	1592.9	1592.9	1591.1	1591.1
5°	1576.2	1574.4	1574.4	1572.5	1572.5
7.5°	1563.3	1561.4	1559.6	1557.7	1554.0
10°	1544.7	1544.7	1542.9	1533.6	1531.7
12.5°	1515.0	1513.2	1505.8	1492.8	1489.1
15°	1474.3	1474.3	1459.4	1444.6	1439.0
17.5°	1429.7	1427.9	1409.3	1394.5	1387.1
20°	1381.5	1377.8	1359.3	1335.2	1322.2
22.5°	1327.8	1327.8	1305.5	1274.0	1261.0
25°	1277.7	1270.3	1249.9	1205.4	1172.0
27.5°	1220.2	1209.1	1186.8	1123.8	1084.8
30°	1157.1	1151.6	1120.1	1038.5	1008.8
32.5°	1097.8	1088.5	1055.2	969.9	945.7
35°	1036.6	1029.2	979.1	904.9	882.7
37.5°	975.4	966.1	903.1	843.8	815.9
40°	914.2	903.1	834.5	780.7	751.0
42.5°	856.7	841.9	775.1	717.7	684.3
45°	795.5	778.8	712.1	652.7	626.8
47.5°	734.3	719.5	658.3	597.1	567.4
50°	669.4	656.5	600.8	539.6	508.1
52.5°	615.7	595.3	541.5	480.3	454.3
55°	552.6	535.9	485.9	428.4	406.1
57.5°	495.1	478.4	432.1	378.3	359.8
60°	441.3	417.2	378.3	331.9	317.1
62.5°	382.0	363.5	330.1	291.1	309.7
65°	328.2	309.7	280.0	285.6	237.4
67.5°	268.9	259.6	233.7	207.7	200.3
70°	218.8	207.7	198.4	170.6	163.2
72.5°	174.3	163.2	150.2	135.4	129.8
75°	131.7	122.4	115.0	109.4	120.5
77.5°	90.9	87.2	81.6	76.0	74.2
80°	59.3	57.5	55.6	53.8	51.9
82.5°	35.2	35.2	35.2	35.2	35.2
85°	18.5	20.4	22.3	24.1	26.0
87.5°	11.1	11.1	13.0	14.8	16.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)