

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: P560290

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-93-85-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560290
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-40-UNV-93-85-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3119.0 lumens
Efficiency: N/A
Efficacy: 72.2 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

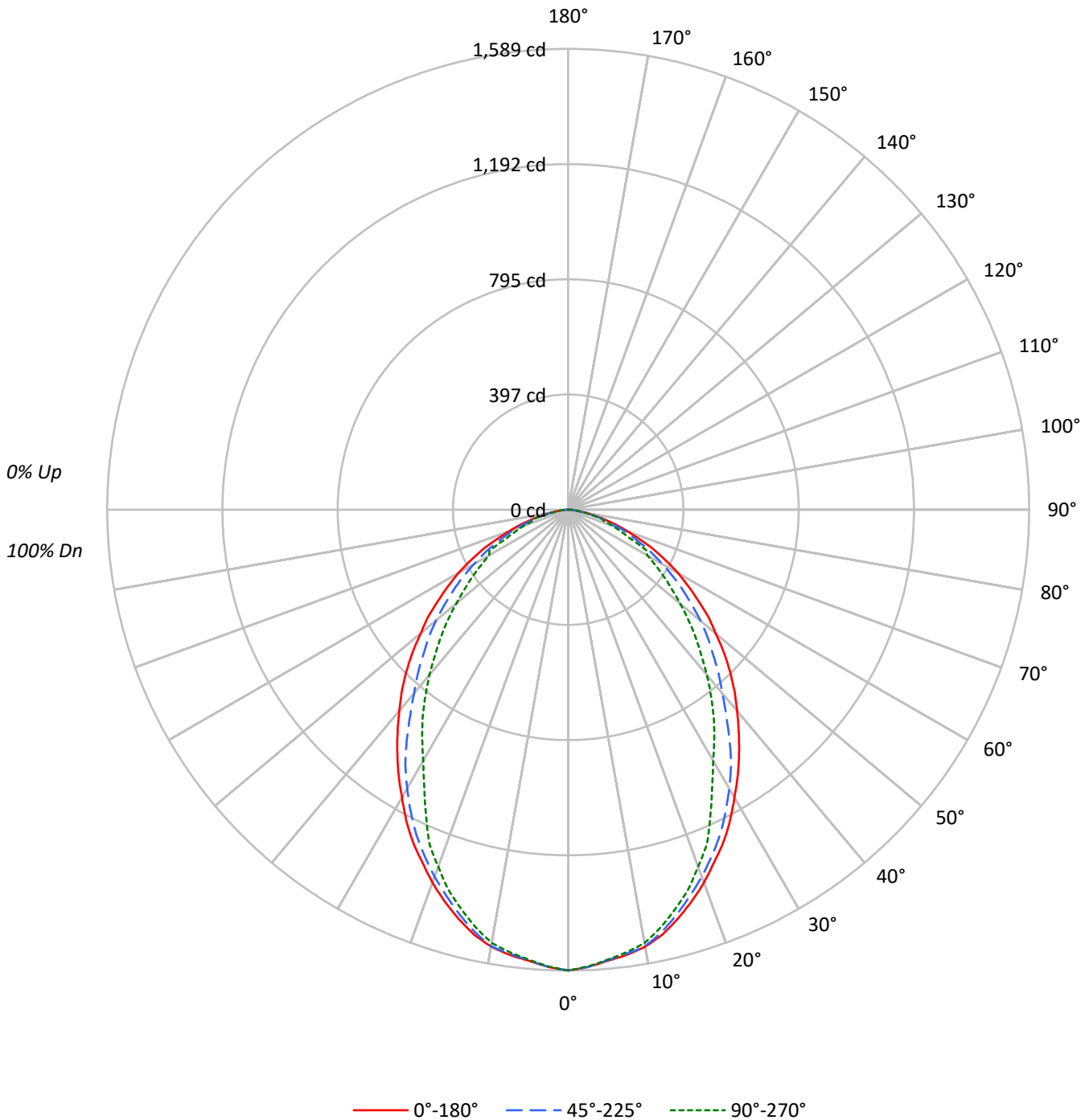
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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°	8551	8551	8551
5°	8434	8425	8415
10°	8361	8352	8291
15°	8136	8054	7942
20°	7837	7711	7501
25°	7515	7352	6893
30°	7122	6894	6210
35°	6746	6372	5744
40°	6362	5807	5226
45°	5998	5368	4725
50°	5552	4983	4214
55°	5135	4515	3774
60°	4705	4033	3381
65°	4140	3531	2994
70°	3410	3092	2543
75°	2712	2368	2483
80°	1822	1708	1593
85°	1136	1359	1587

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5998 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.9	4.7
10°-20°	405.9	13.0
20°-30°	561.9	18.0
30°-40°	599.2	19.2
40°-50°	546.6	17.5
50°-60°	428.2	13.7
60°-70°	279.1	8.9
70°-80°	123.7	4.0
80°-90°	26.5	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°	1115.7	35.8
0°-40°	1714.9	55.0
0°-60°	2689.7	86.2
0°-90°	3119.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3119.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1589	1589	1589	1589	1589	
5°	1561	1559	1559	1558	1558	148
15°	1460	1460	1446	1431	1425	411
25°	1266	1258	1238	1194	1161	581
35°	1027	1019	970	896	874	642
45°	788	771	705	646	621	607
55°	547	531	481	424	402	491
65°	325	307	277	283	235	320
75°	130	121	114	108	119	140
85°	18	20	22	24	26	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1588.8	1588.8	1588.8	1588.8	1588.8
2.5°	1577.8	1577.8	1577.8	1575.9	1575.9
5°	1561.2	1559.4	1559.4	1557.6	1557.6
7.5°	1548.4	1546.5	1544.7	1542.9	1539.2
10°	1530.0	1530.0	1528.2	1519.0	1517.1
12.5°	1500.6	1498.8	1491.4	1478.6	1474.9
15°	1460.2	1460.2	1445.5	1430.8	1425.3
17.5°	1416.1	1414.3	1395.9	1381.2	1373.9
20°	1368.4	1364.7	1346.3	1322.5	1309.6
22.5°	1315.1	1315.1	1293.1	1261.8	1249.0
25°	1265.5	1258.2	1238.0	1193.9	1160.8
27.5°	1208.6	1197.6	1175.5	1113.1	1074.5
30°	1146.1	1140.6	1109.4	1028.6	999.2
32.5°	1087.3	1078.2	1045.1	960.6	936.7
35°	1026.7	1019.4	969.8	896.3	874.3
37.5°	966.1	956.9	894.5	835.7	808.2
40°	905.5	894.5	826.5	773.3	743.9
42.5°	848.6	833.9	767.8	710.8	677.8
45°	788.0	771.4	705.3	646.5	620.8
47.5°	727.3	712.7	652.0	591.4	562.0
50°	663.1	650.2	595.1	534.5	503.3
52.5°	609.8	589.6	536.3	475.7	450.0
55°	547.3	530.8	481.2	424.3	402.2
57.5°	490.4	473.9	428.0	374.7	356.3
60°	437.1	413.3	374.7	328.8	314.1
62.5°	378.4	360.0	326.9	288.4	306.7
65°	325.1	306.7	277.3	282.9	235.1
67.5°	266.3	257.1	231.4	205.7	198.4
70°	216.7	205.7	196.5	169.0	161.6
72.5°	172.7	161.6	148.8	134.1	128.6
75°	130.4	121.2	113.9	108.4	119.4
77.5°	90.0	86.3	80.8	75.3	73.5
80°	58.8	56.9	55.1	53.3	51.4
82.5°	34.9	34.9	34.9	34.9	34.9
85°	18.4	20.2	22.0	23.9	25.7
87.5°	11.0	11.0	12.9	14.7	16.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)