

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: P560324

Luminaire Tested: FSR-12-2-LD4-2HI-50-UNV-81-86-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560324
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-81-86-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3078.0 lumens
Efficiency: N/A
Efficacy: 71.3 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

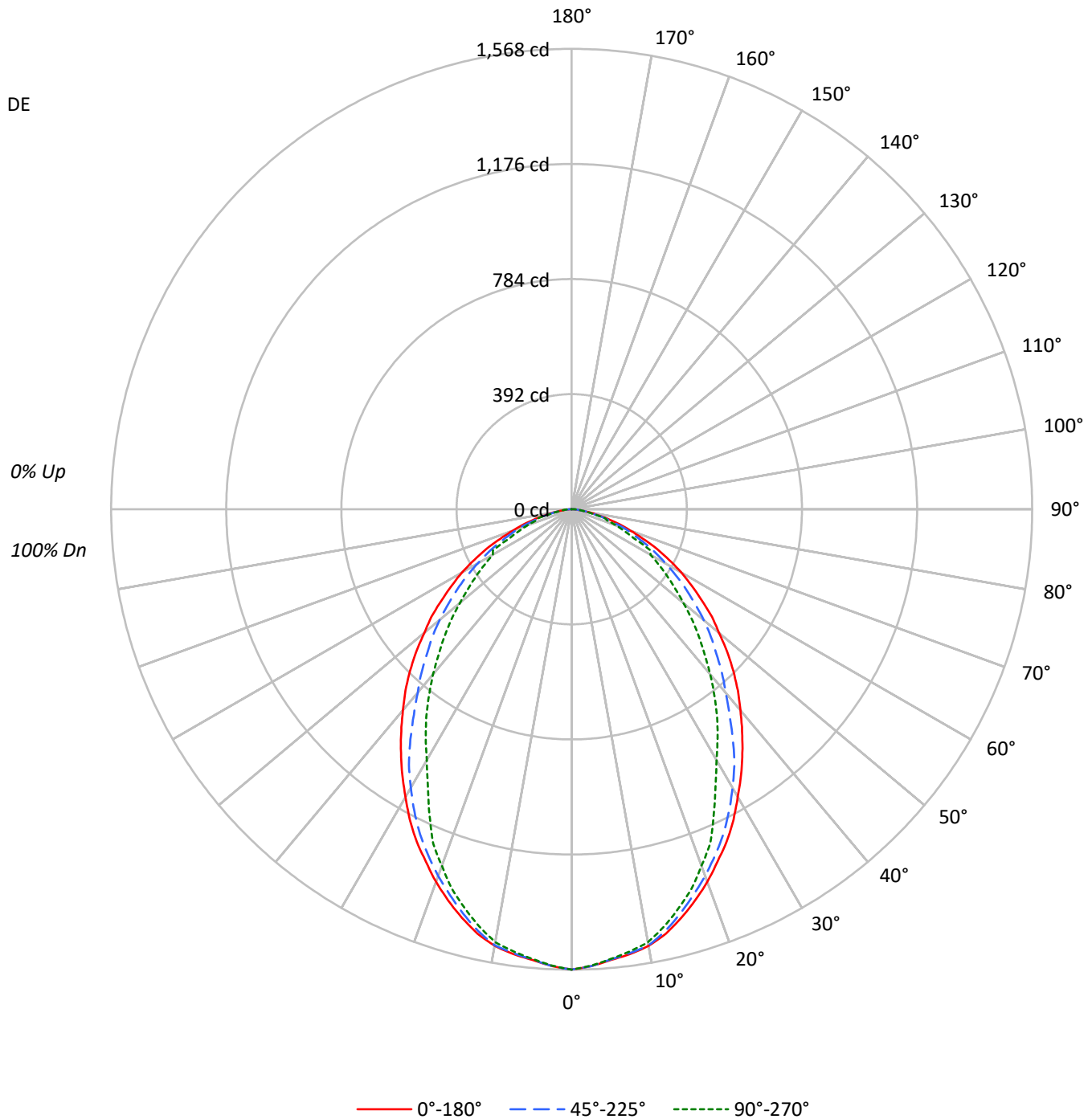
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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				
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°	8438	8438	8438
5°	8324	8314	8304
10°	8252	8242	8182
15°	8029	7948	7837
20°	7734	7609	7402
25°	7416	7255	6803
30°	7029	6804	6128
35°	6657	6288	5669
40°	6278	5731	5158
45°	5918	5297	4663
50°	5478	4917	4159
55°	5069	4456	3725
60°	4644	3980	3337
65°	4085	3486	2954
70°	3366	3051	2510
75°	2676	2337	2450
80°	1798	1686	1574
85°	1118	1346	1568

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5918 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.0	4.7
10°-20°	400.5	13.0
20°-30°	554.5	18.0
30°-40°	591.3	19.2
40°-50°	539.4	17.5
50°-60°	422.6	13.7
60°-70°	275.4	8.9
70°-80°	122.0	4.0
80°-90°	26.2	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°	1101.0	35.8
0°-40°	1692.3	55.0
0°-60°	2654.4	86.2
0°-90°	3078.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3078.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1568	1568	1568	1568	1568	
5°	1541	1539	1539	1537	1537	146
15°	1441	1441	1426	1412	1407	405
25°	1249	1242	1222	1178	1146	573
35°	1013	1006	957	884	863	633
45°	778	761	696	638	613	599
55°	540	524	475	419	397	484
65°	321	303	274	279	232	316
75°	129	120	112	107	118	138
85°	18	20	22	24	25	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1567.9	1567.9	1567.9	1567.9	1567.9
2.5°	1557.0	1557.0	1557.0	1555.2	1555.2
5°	1540.7	1538.9	1538.9	1537.1	1537.1
7.5°	1528.0	1526.2	1524.4	1522.6	1519.0
10°	1509.9	1509.9	1508.1	1499.0	1497.2
12.5°	1480.9	1479.1	1471.8	1459.1	1455.5
15°	1441.0	1441.0	1426.5	1412.0	1406.6
17.5°	1397.5	1395.7	1377.6	1363.1	1355.8
20°	1350.4	1346.8	1328.6	1305.1	1292.4
22.5°	1297.8	1297.8	1276.1	1245.3	1232.6
25°	1248.9	1241.6	1221.7	1178.2	1145.6
27.5°	1192.7	1181.8	1160.1	1098.4	1060.4
30°	1131.1	1125.6	1094.8	1015.1	986.1
32.5°	1073.1	1064.0	1031.4	948.0	924.4
35°	1013.2	1006.0	957.0	884.5	862.8
37.5°	953.4	944.4	882.7	824.7	797.5
40°	893.6	882.7	815.7	763.1	734.1
42.5°	837.4	822.9	757.7	701.5	668.8
45°	777.6	761.3	696.0	638.0	612.7
47.5°	717.8	703.3	643.5	583.7	554.7
50°	654.3	641.7	587.3	527.5	496.7
52.5°	601.8	581.8	529.3	469.5	444.1
55°	540.2	523.8	474.9	418.7	397.0
57.5°	484.0	467.6	422.3	369.8	351.6
60°	431.4	407.8	369.8	324.5	310.0
62.5°	373.4	355.3	322.6	284.6	302.7
65°	320.8	302.7	273.7	279.1	232.0
67.5°	262.8	253.8	228.4	203.0	195.8
70°	213.9	203.0	193.9	166.8	159.5
72.5°	170.4	159.5	146.8	132.3	126.9
75°	128.7	119.6	112.4	106.9	117.8
77.5°	88.8	85.2	79.8	74.3	72.5
80°	58.0	56.2	54.4	52.6	50.8
82.5°	34.4	34.4	34.4	34.4	34.4
85°	18.1	19.9	21.8	23.6	25.4
87.5°	10.9	10.9	12.7	14.5	16.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)