

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: P590152

Luminaire Tested: FSR-24-2-LD4-2HI-35-UNV-82-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590152
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-2HI-35-UNV-82-87-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4174.0 lumens
Efficiency: N/A
Efficacy: 96.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

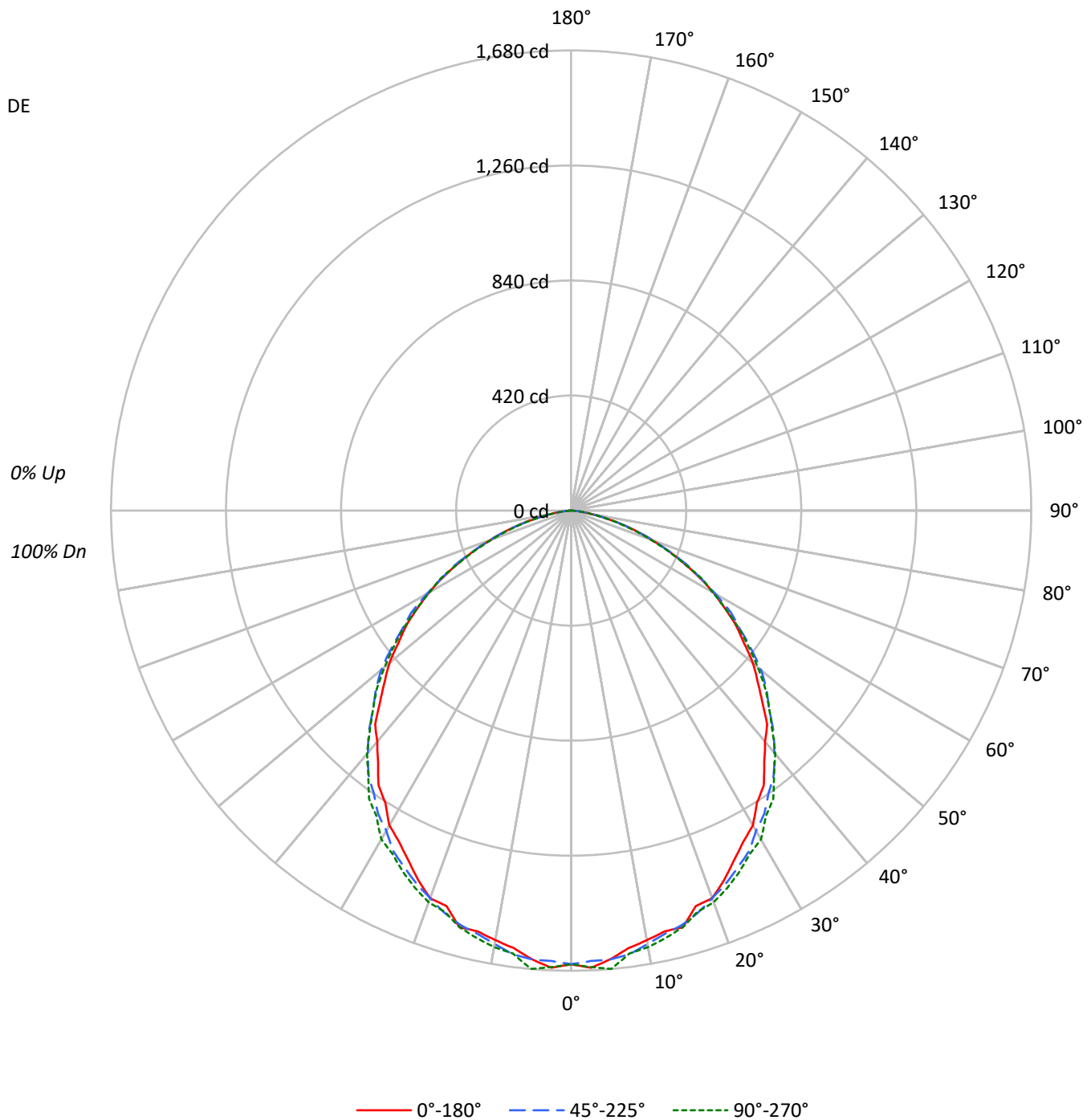
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4457	4457	4457
5°	4442	4444	4537
10°	4352	4390	4421
15°	4386	4362	4387
20°	4312	4312	4358
25°	4180	4271	4318
30°	4122	4195	4306
35°	4025	4130	4223
40°	3868	4055	4073
45°	3752	3885	3890
50°	3628	3792	3720
55°	3457	3524	3499
60°	3233	3265	3206
65°	2883	2956	2862
70°	2473	2482	2412
75°	1959	1955	1879
80°	1313	1275	1226
85°	713	707	661

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3985 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.8	3.7
10°-20°	441.5	10.6
20°-30°	661.5	15.8
30°-40°	784.0	18.8
40°-50°	785.4	18.8
50°-60°	666.7	16.0
60°-70°	449.5	10.8
70°-80°	197.5	4.7
80°-90°	32.1	0.8
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°	1258.8	30.2
0°-40°	2042.8	48.9
0°-60°	3494.9	83.7
0°-90°	4174.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4174.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1656	1656	1656	1656	1656	
5°	1644	1640	1645	1640	1680	155
15°	1574	1556	1566	1574	1575	439
25°	1408	1415	1438	1457	1454	651
35°	1225	1229	1257	1286	1286	761
45°	986	1004	1021	1047	1022	763
55°	737	732	751	746	746	656
65°	453	447	464	446	450	450
75°	188	184	188	175	181	202
85°	23	22	23	22	21	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1656.1	1656.1	1656.1	1656.1	1656.1
2.5°	1670.5	1657.8	1646.1	1659.8	1668.1
5°	1644.4	1640.5	1645.0	1640.1	1679.7
7.5°	1610.6	1625.3	1633.9	1628.6	1630.9
10°	1592.6	1587.5	1606.5	1619.8	1617.9
12.5°	1573.4	1581.1	1582.2	1596.5	1597.8
15°	1574.5	1556.3	1565.9	1574.0	1574.7
17.5°	1513.3	1533.0	1539.6	1558.2	1535.1
20°	1505.8	1491.5	1505.8	1524.8	1521.9
22.5°	1459.8	1443.8	1474.6	1491.5	1490.4
25°	1407.7	1415.4	1438.5	1457.3	1454.3
27.5°	1361.9	1370.9	1403.8	1429.7	1413.0
30°	1326.6	1322.1	1349.9	1373.0	1385.9
32.5°	1263.5	1279.8	1312.3	1335.2	1323.0
35°	1225.3	1228.9	1257.3	1286.4	1285.6
37.5°	1158.3	1175.2	1215.2	1223.3	1215.9
40°	1101.2	1118.1	1154.3	1163.0	1159.4
42.5°	1059.1	1062.1	1093.1	1103.2	1087.1
45°	985.8	1004.2	1020.8	1047.1	1022.3
47.5°	923.3	931.9	967.8	974.9	961.8
50°	866.7	869.7	905.8	897.0	888.5
52.5°	795.5	808.1	828.4	826.7	816.6
55°	736.9	732.0	751.2	746.1	745.9
57.5°	666.5	675.1	690.9	682.8	669.7
60°	600.7	600.9	606.6	597.4	595.7
62.5°	527.3	529.9	531.2	519.8	538.2
65°	452.7	446.7	464.2	446.5	449.5
67.5°	384.0	387.0	385.3	374.2	378.5
70°	314.3	318.2	315.4	302.8	306.6
72.5°	250.6	245.9	248.9	233.1	240.3
75°	188.4	184.5	188.0	174.7	180.7
77.5°	128.3	131.3	129.2	122.1	126.2
80°	84.7	82.3	82.3	78.3	79.1
82.5°	49.4	47.0	46.4	45.1	47.0
85°	23.1	22.5	22.9	22.2	21.4
87.5°	8.3	8.6	8.6	8.1	7.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)