

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: P590590

Luminaire Tested: FSR-24-2-LD4-3LO-50-UNV-81-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590590
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-LD4-3LO-50-UNV-81-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

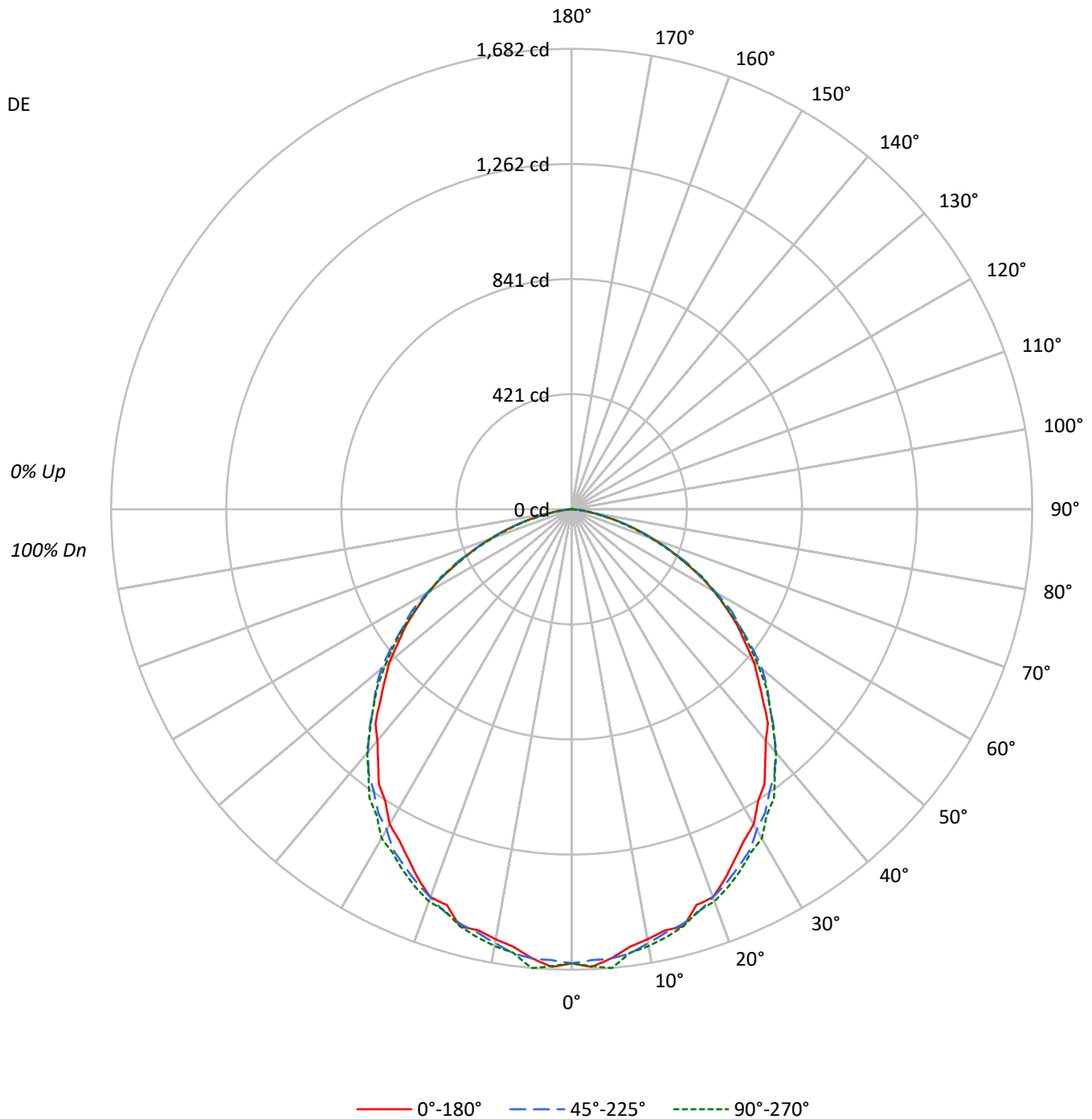
Lumens per Lamp: N/A
Luminaire Lumens: 4181.0 lumens
Efficiency: N/A
Efficacy: 119.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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	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°	4464	4464	4464
5°	4449	4451	4545
10°	4359	4397	4428
15°	4394	4370	4394
20°	4319	4319	4365
25°	4187	4278	4325
30°	4129	4202	4314
35°	4032	4137	4230
40°	3875	4062	4079
45°	3758	3892	3897
50°	3634	3798	3726
55°	3463	3530	3505
60°	3238	3271	3211
65°	2887	2961	2867
70°	2478	2485	2417
75°	1962	1958	1882
80°	1314	1278	1229
85°	713	707	661

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3992 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.0	3.7
10°-20°	442.3	10.6
20°-30°	662.6	15.8
30°-40°	785.3	18.8
40°-50°	786.7	18.8
50°-60°	667.8	16.0
60°-70°	450.2	10.8
70°-80°	197.8	4.7
80°-90°	32.2	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°	1260.9	30.2
0°-40°	2046.2	48.9
0°-60°	3500.8	83.7
0°-90°	4181.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4181.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1659	1659	1659	1659	1659	
5°	1647	1643	1648	1643	1682	155
15°	1577	1559	1568	1577	1577	439
25°	1410	1418	1441	1460	1457	652
35°	1227	1231	1259	1289	1288	762
45°	987	1006	1023	1049	1024	764
55°	738	733	752	747	747	657
65°	453	447	465	447	450	451
75°	189	185	188	175	181	202
85°	23	22	23	22	21	34
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1658.9	1658.9	1658.9	1658.9	1658.9
2.5°	1673.3	1660.6	1648.8	1662.6	1670.9
5°	1647.1	1643.3	1647.8	1642.9	1682.5
7.5°	1613.3	1628.1	1636.6	1631.3	1633.6
10°	1595.3	1590.2	1609.2	1622.5	1620.6
12.5°	1576.0	1583.7	1584.8	1599.2	1600.4
15°	1577.1	1558.9	1568.5	1576.7	1577.3
17.5°	1515.8	1535.5	1542.2	1560.8	1537.7
20°	1508.3	1494.0	1508.3	1527.4	1524.4
22.5°	1462.3	1446.2	1477.1	1494.0	1492.9
25°	1410.0	1417.7	1440.9	1459.7	1456.7
27.5°	1364.2	1373.2	1406.2	1432.1	1415.4
30°	1328.8	1324.3	1352.2	1375.3	1388.2
32.5°	1265.7	1281.9	1314.5	1337.4	1325.2
35°	1227.3	1231.0	1259.4	1288.6	1287.7
37.5°	1160.3	1177.2	1217.3	1225.4	1217.9
40°	1103.1	1120.0	1156.2	1165.0	1161.3
42.5°	1060.9	1063.9	1094.9	1105.0	1089.0
45°	987.4	1005.8	1022.6	1048.9	1024.1
47.5°	924.9	933.4	969.4	976.5	963.4
50°	868.1	871.1	907.3	898.5	890.0
52.5°	796.8	809.4	829.8	828.1	818.0
55°	738.1	733.2	752.5	747.3	747.1
57.5°	667.6	676.2	692.1	683.9	670.8
60°	601.7	601.9	607.7	598.5	596.7
62.5°	528.2	530.8	532.1	520.7	539.1
65°	453.4	447.4	465.0	447.2	450.2
67.5°	384.7	387.7	386.0	374.8	379.1
70°	314.9	318.7	315.9	303.3	307.2
72.5°	251.0	246.3	249.3	233.5	240.8
75°	188.7	184.8	188.3	175.0	181.0
77.5°	128.5	131.5	129.4	122.3	126.4
80°	84.8	82.5	82.5	78.4	79.3
82.5°	49.5	47.1	46.5	45.2	47.1
85°	23.1	22.5	22.9	22.3	21.4
87.5°	8.4	8.6	8.6	8.1	7.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)