

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: P590565

Luminaire Tested: FSR-24-2-LD4-3LO-40-UNV-82-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590565
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-40-UNV-82-84-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

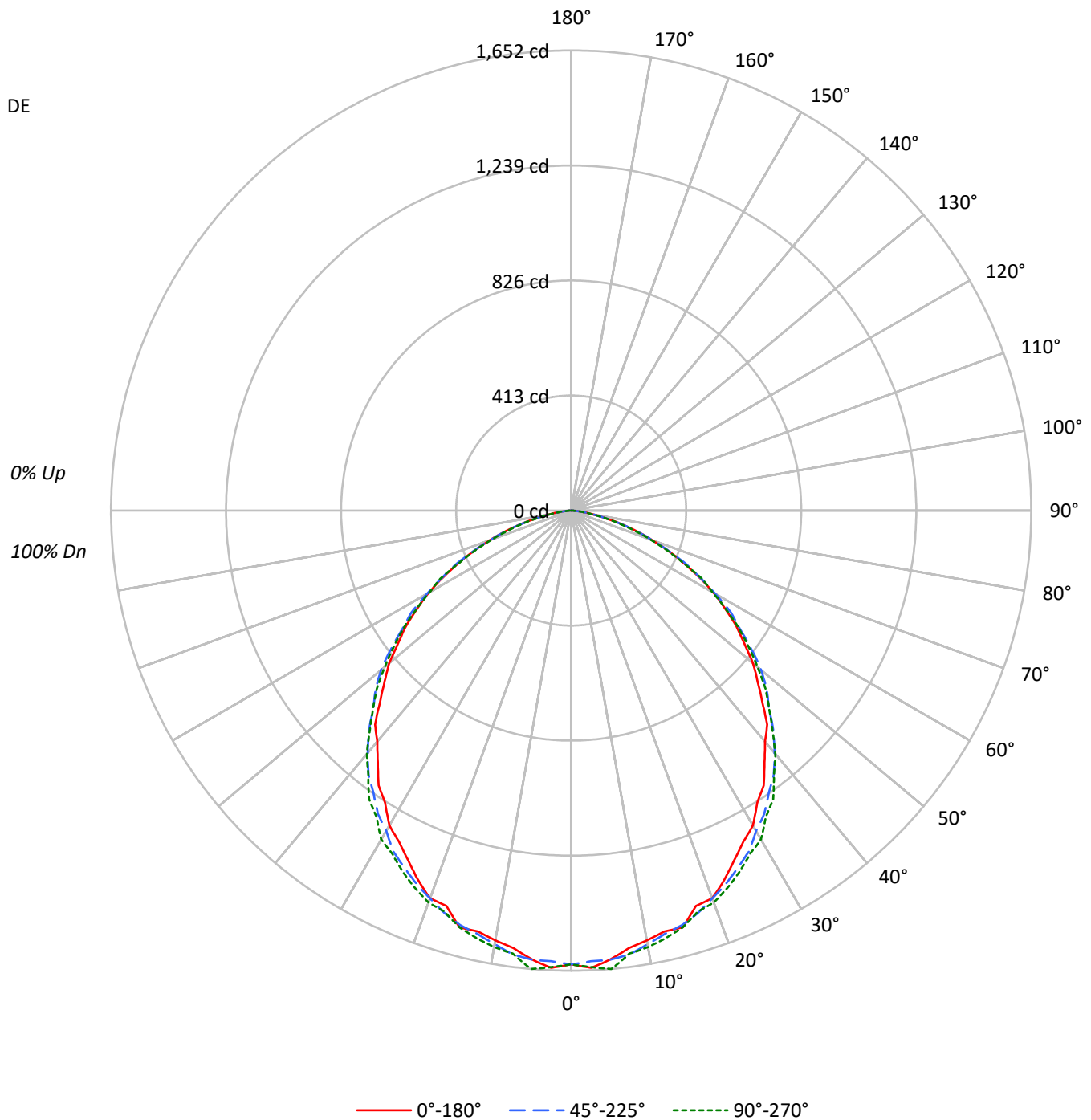
Lumens per Lamp: N/A
Luminaire Lumens: 4106.0 lumens
Efficiency: N/A
Efficacy: 117.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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°	4384	4384	4384
5°	4370	4371	4463
10°	4281	4318	4349
15°	4315	4291	4315
20°	4242	4242	4287
25°	4111	4201	4248
30°	4055	4126	4236
35°	3960	4063	4154
40°	3805	3989	4006
45°	3690	3822	3827
50°	3569	3730	3659
55°	3401	3467	3442
60°	3180	3212	3154
65°	2835	2908	2816
70°	2433	2441	2373
75°	1927	1922	1848
80°	1291	1255	1206
85°	701	695	648

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3920 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.2	3.7
10°-20°	434.3	10.6
20°-30°	650.7	15.8
30°-40°	771.2	18.8
40°-50°	772.6	18.8
50°-60°	655.8	16.0
60°-70°	442.2	10.8
70°-80°	194.3	4.7
80°-90°	31.6	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°	1238.3	30.2
0°-40°	2009.5	48.9
0°-60°	3438.0	83.7
0°-90°	4106.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4106.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1629	1629	1629	1629	1629	
5°	1618	1614	1618	1613	1652	153
15°	1549	1531	1540	1548	1549	432
25°	1385	1392	1415	1434	1431	640
35°	1205	1209	1237	1266	1265	748
45°	970	988	1004	1030	1006	750
55°	725	720	739	734	734	645
65°	445	439	457	439	442	443
75°	185	182	185	172	178	199
85°	23	22	22	22	21	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1629.2	1629.2	1629.2	1629.2	1629.2
2.5°	1643.3	1630.8	1619.3	1632.7	1640.9
5°	1617.6	1613.8	1618.2	1613.4	1652.3
7.5°	1584.4	1598.9	1607.3	1602.0	1604.3
10°	1566.7	1561.6	1580.4	1593.4	1591.5
12.5°	1547.8	1555.3	1556.4	1570.5	1571.7
15°	1548.8	1530.9	1540.4	1548.4	1549.0
17.5°	1488.6	1508.0	1514.5	1532.8	1510.1
20°	1481.3	1467.2	1481.3	1500.0	1497.1
22.5°	1436.1	1420.3	1450.6	1467.2	1466.1
25°	1384.7	1392.3	1415.0	1433.5	1430.6
27.5°	1339.7	1348.6	1380.9	1406.4	1390.0
30°	1305.0	1300.6	1327.9	1350.7	1363.3
32.5°	1243.0	1258.9	1290.9	1313.4	1301.4
35°	1205.3	1208.9	1236.9	1265.5	1264.6
37.5°	1139.5	1156.1	1195.4	1203.4	1196.0
40°	1083.3	1099.9	1135.5	1144.1	1140.5
42.5°	1041.9	1044.8	1075.3	1085.2	1069.4
45°	969.7	987.8	1004.2	1030.1	1005.7
47.5°	908.3	916.7	952.0	959.0	946.2
50°	852.5	855.5	891.0	882.4	874.0
52.5°	782.5	794.9	814.9	813.2	803.3
55°	724.9	720.0	739.0	733.9	733.7
57.5°	655.7	664.1	679.6	671.6	658.8
60°	590.9	591.1	596.8	587.7	586.0
62.5°	518.7	521.2	522.5	511.4	529.4
65°	445.3	439.4	456.7	439.2	442.2
67.5°	377.8	380.7	379.0	368.1	372.3
70°	309.2	313.0	310.3	297.9	301.6
72.5°	246.5	241.9	244.8	229.3	236.4
75°	185.3	181.5	184.9	171.9	177.7
77.5°	126.2	129.2	127.1	120.1	124.1
80°	83.3	81.0	81.0	77.0	77.8
82.5°	48.6	46.3	45.6	44.4	46.3
85°	22.7	22.1	22.5	21.9	21.0
87.5°	8.2	8.4	8.4	8.0	7.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)