

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: P590567

Luminaire Tested: FSR-24-2-LD4-3LO-40-UNV-82-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590567
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-82-86-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

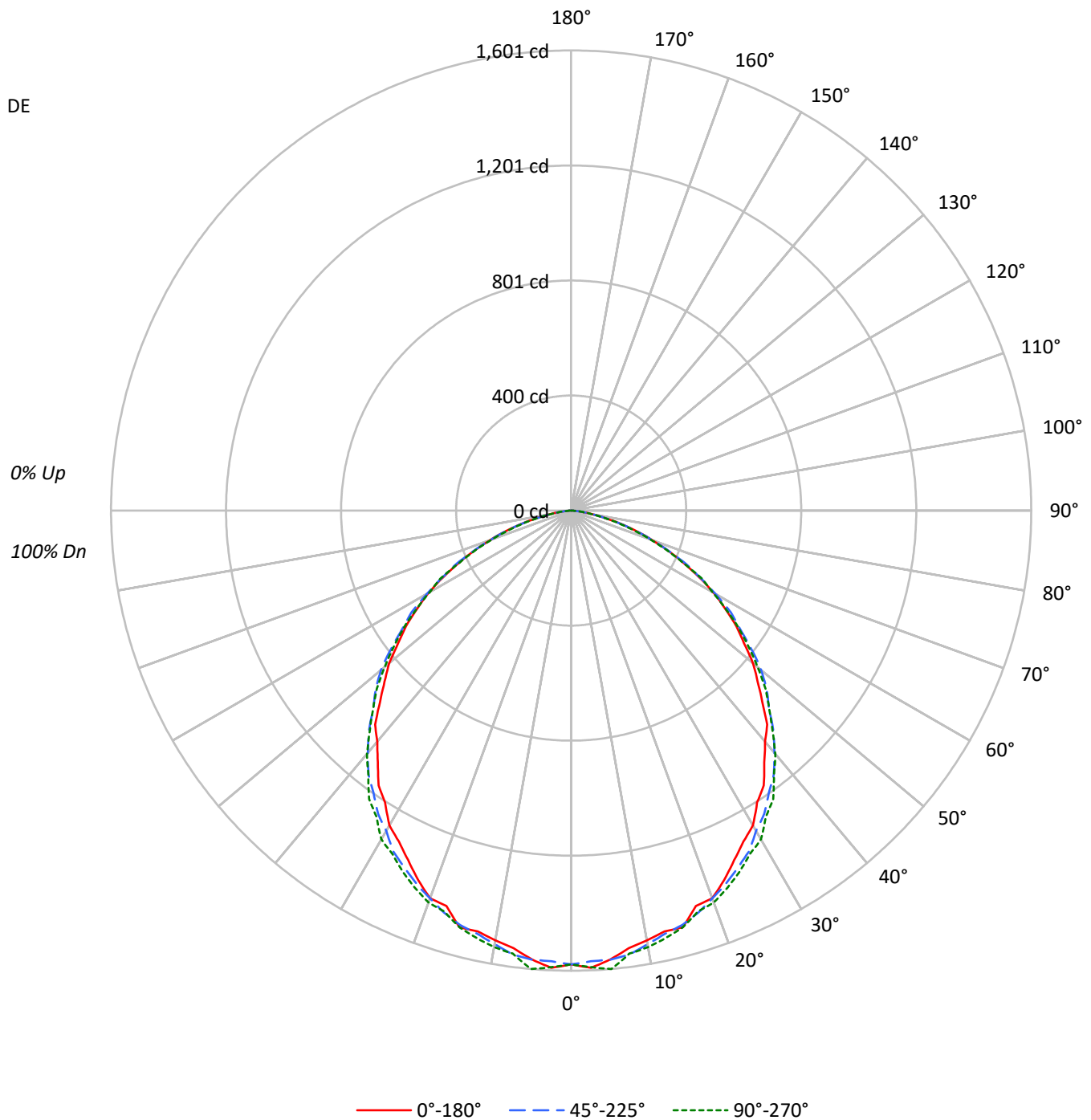
Lumens per Lamp: N/A
Luminaire Lumens: 3979.0 lumens
Efficiency: N/A
Efficacy: 113.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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°	4249	4249	4249
5°	4234	4236	4325
10°	4148	4185	4214
15°	4181	4159	4182
20°	4111	4111	4155
25°	3984	4072	4116
30°	3929	3999	4105
35°	3837	3937	4026
40°	3688	3865	3882
45°	3576	3703	3709
50°	3459	3615	3546
55°	3295	3360	3336
60°	3082	3112	3056
65°	2748	2818	2728
70°	2357	2366	2300
75°	1867	1863	1790
80°	1251	1216	1168
85°	679	673	630

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3799 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.5	3.7
10°-20°	420.9	10.6
20°-30°	630.6	15.8
30°-40°	747.4	18.8
40°-50°	748.7	18.8
50°-60°	635.6	16.0
60°-70°	428.5	10.8
70°-80°	188.3	4.7
80°-90°	30.6	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°	1200.0	30.2
0°-40°	1947.3	48.9
0°-60°	3331.6	83.7
0°-90°	3979.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3979.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1579	1579	1579	1579	1579	
5°	1568	1564	1568	1564	1601	148
15°	1501	1484	1493	1500	1501	418
25°	1342	1349	1371	1389	1386	620
35°	1168	1172	1199	1226	1226	725
45°	940	957	973	998	975	727
55°	702	698	716	711	711	625
65°	432	426	442	426	428	429
75°	180	176	179	166	172	192
85°	22	21	22	21	20	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1578.8	1578.8	1578.8	1578.8	1578.8
2.5°	1592.4	1580.4	1569.2	1582.2	1590.2
5°	1567.6	1563.9	1568.2	1563.5	1601.2
7.5°	1535.3	1549.4	1557.6	1552.5	1554.7
10°	1518.2	1513.3	1531.5	1544.1	1542.3
12.5°	1499.9	1507.2	1508.2	1521.9	1523.1
15°	1500.9	1483.6	1492.7	1500.5	1501.1
17.5°	1442.6	1461.4	1467.7	1485.4	1463.4
20°	1435.5	1421.8	1435.5	1453.6	1450.8
22.5°	1391.6	1376.4	1405.7	1421.8	1420.8
25°	1341.9	1349.2	1371.3	1389.2	1386.3
27.5°	1298.3	1306.8	1338.2	1362.9	1347.0
30°	1264.6	1260.4	1286.9	1308.9	1321.1
32.5°	1204.5	1220.0	1251.0	1272.8	1261.2
35°	1168.0	1171.5	1198.6	1226.3	1225.5
37.5°	1104.2	1120.3	1158.4	1166.2	1159.1
40°	1049.8	1065.9	1100.3	1108.7	1105.2
42.5°	1009.6	1012.5	1042.0	1051.6	1036.3
45°	939.7	957.2	973.1	998.2	974.6
47.5°	880.2	888.3	922.6	929.3	916.9
50°	826.2	829.0	863.5	855.1	847.0
52.5°	758.3	770.3	789.7	788.1	778.5
55°	702.4	697.8	716.1	711.2	711.0
57.5°	635.4	643.5	658.6	650.9	638.4
60°	572.6	572.8	578.3	569.5	567.9
62.5°	502.7	505.1	506.3	495.5	513.1
65°	431.5	425.8	442.5	425.6	428.5
67.5°	366.1	369.0	367.3	356.7	360.8
70°	299.6	303.3	300.7	288.6	292.3
72.5°	238.9	234.4	237.3	222.2	229.1
75°	179.6	175.9	179.2	166.5	172.2
77.5°	122.3	125.2	123.1	116.4	120.3
80°	80.7	78.5	78.5	74.6	75.4
82.5°	47.1	44.8	44.2	43.0	44.8
85°	22.0	21.4	21.8	21.2	20.4
87.5°	7.9	8.2	8.2	7.7	7.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)