

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: P590342

Luminaire Tested: FSR-24-2-LD4-2STD-35-UNV-82-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590342
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-LD4-2STD-35-UNV-82-85-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3557.0 lumens
Efficiency: N/A
Efficacy: 106.8 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

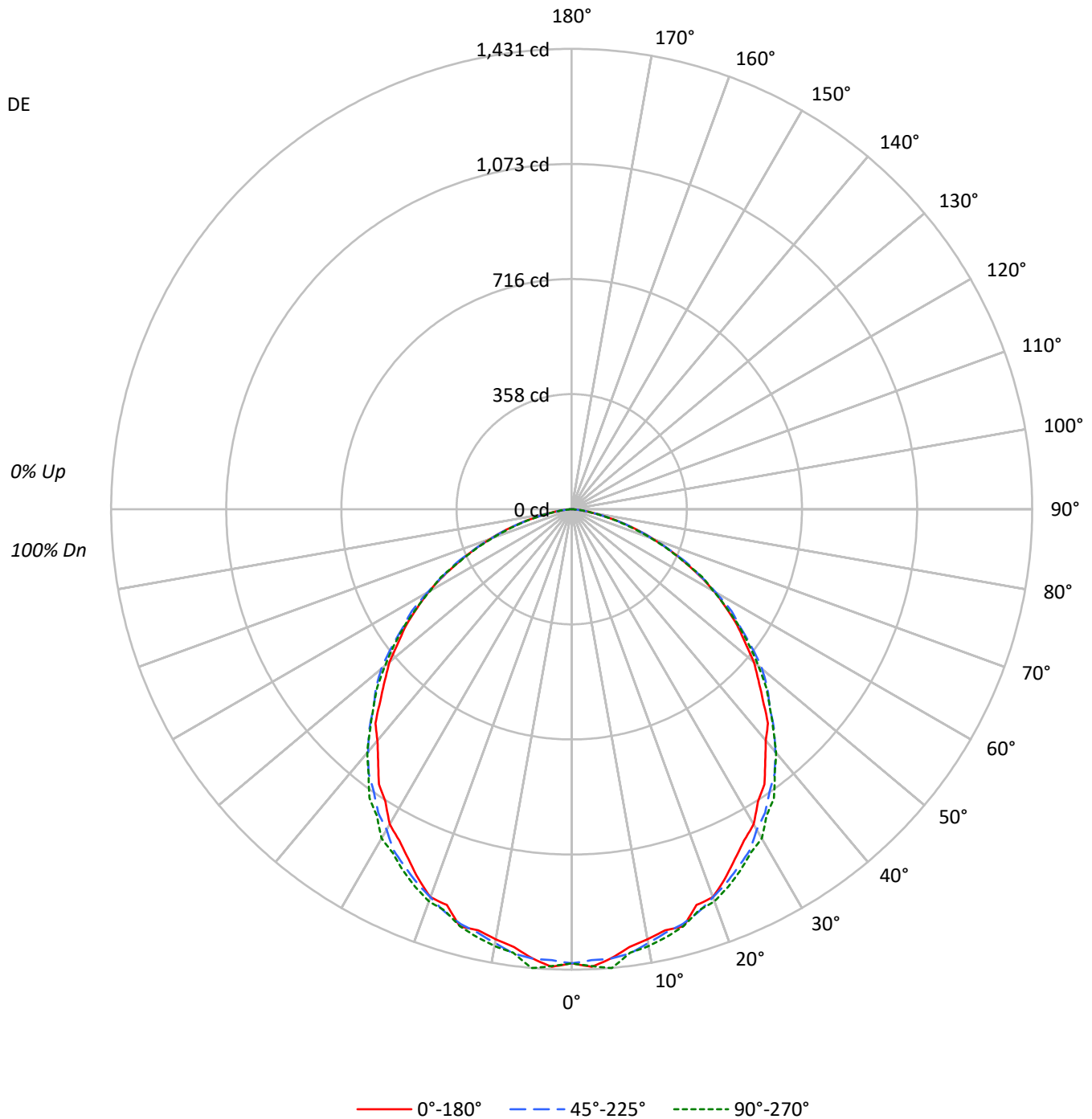
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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													86															
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73													73															
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62													62															
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53													53															
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46													46															
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41													41															
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36													36															
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32													32															
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29													29															
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26													26															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3798	3798	3798
5°	3785	3787	3867
10°	3709	3741	3767
15°	3738	3718	3738
20°	3675	3675	3714
25°	3562	3640	3680
30°	3513	3575	3670
35°	3430	3520	3599
40°	3297	3455	3471
45°	3197	3311	3315
50°	3092	3231	3170
55°	2946	3004	2982
60°	2755	2782	2732
65°	2457	2519	2439
70°	2108	2115	2056
75°	1669	1666	1601
80°	1119	1088	1044
85°	608	602	562

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3396 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.8	3.7
10°-20°	376.2	10.6
20°-30°	563.7	15.8
30°-40°	668.1	18.8
40°-50°	669.3	18.8
50°-60°	568.2	16.0
60°-70°	383.1	10.8
70°-80°	168.3	4.7
80°-90°	27.4	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°	1072.7	30.2
0°-40°	1740.8	48.9
0°-60°	2978.3	83.7
0°-90°	3557.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3557.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1411	1411	1411	1411	1411	
5°	1401	1398	1402	1398	1431	132
15°	1342	1326	1334	1341	1342	374
25°	1200	1206	1226	1242	1239	555
35°	1044	1047	1072	1096	1096	648
45°	840	856	870	892	871	650
55°	628	624	640	636	636	559
65°	386	381	396	380	383	384
75°	160	157	160	149	154	172
85°	20	19	20	19	18	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1411.3	1411.3	1411.3	1411.3	1411.3
2.5°	1423.5	1412.8	1402.8	1414.4	1421.5
5°	1401.3	1398.0	1401.9	1397.7	1431.4
7.5°	1372.5	1385.1	1392.4	1387.8	1389.8
10°	1357.2	1352.8	1369.1	1380.3	1378.7
12.5°	1340.8	1347.4	1348.3	1360.5	1361.6
15°	1341.7	1326.2	1334.4	1341.4	1341.9
17.5°	1289.6	1306.4	1312.0	1327.9	1308.2
20°	1283.2	1271.0	1283.2	1299.4	1296.9
22.5°	1244.0	1230.4	1256.6	1271.0	1270.1
25°	1199.6	1206.1	1225.8	1241.9	1239.3
27.5°	1160.6	1168.2	1196.3	1218.4	1204.1
30°	1130.5	1126.7	1150.4	1170.1	1181.0
32.5°	1076.8	1090.6	1118.3	1137.8	1127.4
35°	1044.1	1047.2	1071.5	1096.3	1095.5
37.5°	987.1	1001.5	1035.6	1042.5	1036.1
40°	938.5	952.9	983.6	991.1	988.0
42.5°	902.6	905.1	931.5	940.1	926.4
45°	840.1	855.7	869.9	892.4	871.2
47.5°	786.8	794.1	824.7	830.8	819.6
50°	738.6	741.1	771.9	764.4	757.1
52.5°	677.9	688.6	705.9	704.5	695.9
55°	627.9	623.8	640.2	635.8	635.6
57.5°	568.0	575.3	588.8	581.8	570.7
60°	511.9	512.1	517.0	509.1	507.7
62.5°	449.4	451.6	452.6	443.0	458.7
65°	385.8	380.7	395.6	380.5	383.0
67.5°	327.3	329.8	328.4	318.9	322.5
70°	267.9	271.1	268.8	258.0	261.3
72.5°	213.6	209.6	212.1	198.6	204.8
75°	160.5	157.3	160.2	148.9	154.0
77.5°	109.3	111.9	110.1	104.1	107.5
80°	72.2	70.2	70.2	66.7	67.4
82.5°	42.1	40.1	39.5	38.4	40.1
85°	19.7	19.1	19.5	19.0	18.2
87.5°	7.1	7.3	7.3	6.9	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)