

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: P590410

Luminaire Tested: FSR-24-2-LD4-2STD-50-UNV-82-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590410
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-50-UNV-82-94-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3736.0 lumens
Efficiency: N/A
Efficacy: 112.2 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

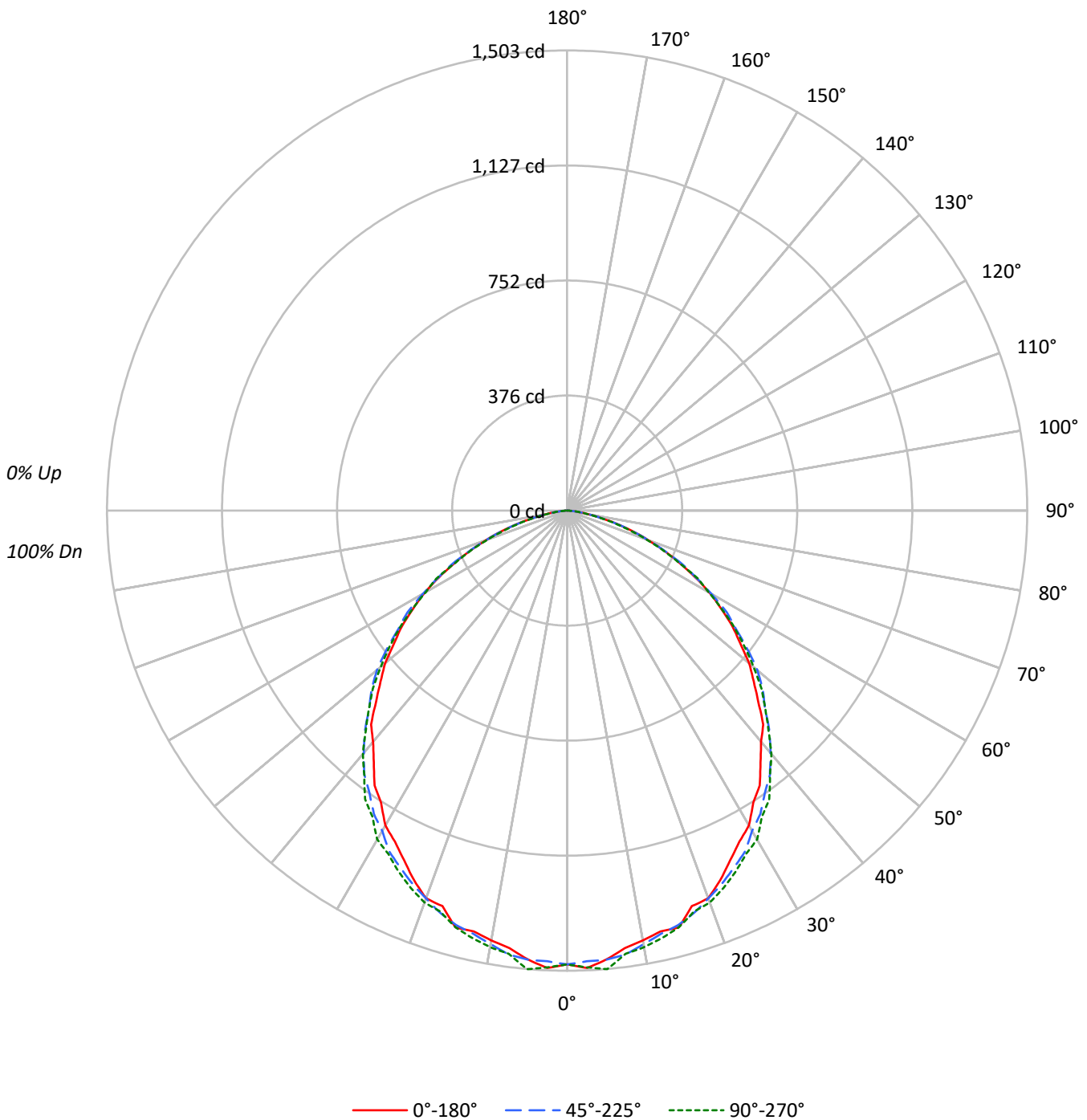
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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																												
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°	3989	3989	3989
5°	3976	3977	4061
10°	3895	3929	3957
15°	3926	3905	3926
20°	3860	3860	3901
25°	3741	3823	3865
30°	3690	3755	3854
35°	3603	3697	3780
40°	3463	3629	3645
45°	3358	3477	3483
50°	3247	3394	3329
55°	3094	3155	3132
60°	2893	2922	2870
65°	2580	2646	2562
70°	2213	2221	2160
75°	1753	1749	1681
80°	1175	1142	1097
85°	639	633	590

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3567 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.4	3.7
10°-20°	395.2	10.6
20°-30°	592.1	15.8
30°-40°	701.7	18.8
40°-50°	703.0	18.8
50°-60°	596.7	16.0
60°-70°	402.3	10.8
70°-80°	176.8	4.7
80°-90°	28.7	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°	1126.7	30.2
0°-40°	1828.4	48.9
0°-60°	3128.2	83.7
0°-90°	3736.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3736.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1482	1482	1482	1482	1482	
5°	1472	1468	1472	1468	1503	139
15°	1409	1393	1402	1409	1409	393
25°	1260	1267	1288	1304	1302	582
35°	1097	1100	1125	1151	1151	681
45°	882	899	914	937	915	683
55°	660	655	672	668	668	587
65°	405	400	416	400	402	403
75°	169	165	168	156	162	181
85°	21	20	20	20	19	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1482.4	1482.4	1482.4	1482.4	1482.4
2.5°	1495.2	1483.9	1473.4	1485.6	1493.1
5°	1471.8	1468.4	1472.4	1468.0	1503.4
7.5°	1441.6	1454.8	1462.4	1457.7	1459.8
10°	1425.5	1420.9	1437.9	1449.8	1448.1
12.5°	1408.3	1415.2	1416.1	1429.0	1430.1
15°	1409.2	1393.0	1401.6	1408.9	1409.4
17.5°	1354.5	1372.1	1378.0	1394.7	1374.0
20°	1347.8	1335.0	1347.8	1364.8	1362.2
22.5°	1306.7	1292.3	1319.9	1335.0	1334.0
25°	1260.0	1266.8	1287.5	1304.4	1301.7
27.5°	1219.0	1227.0	1256.5	1279.7	1264.7
30°	1187.4	1183.4	1208.3	1228.9	1240.4
32.5°	1131.0	1145.5	1174.6	1195.1	1184.2
35°	1096.7	1099.9	1125.4	1151.4	1150.7
37.5°	1036.8	1051.9	1087.7	1095.0	1088.3
40°	985.7	1000.8	1033.1	1041.0	1037.7
42.5°	948.0	950.7	978.4	987.4	973.0
45°	882.3	898.8	913.7	937.3	915.1
47.5°	826.4	834.1	866.3	872.6	860.9
50°	775.7	778.4	810.7	802.9	795.2
52.5°	712.0	723.3	741.5	739.9	730.9
55°	659.5	655.1	672.4	667.8	667.6
57.5°	596.6	604.2	618.4	611.1	599.4
60°	537.6	537.8	543.0	534.8	533.2
62.5°	472.0	474.3	475.4	465.3	481.7
65°	405.2	399.8	415.5	399.6	402.3
67.5°	343.7	346.4	344.9	334.9	338.8
70°	281.3	284.8	282.3	271.0	274.5
72.5°	224.3	220.1	222.8	208.6	215.1
75°	168.6	165.2	168.2	156.4	161.7
77.5°	114.8	117.5	115.6	109.3	112.9
80°	75.8	73.7	73.7	70.1	70.8
82.5°	44.2	42.1	41.5	40.4	42.1
85°	20.7	20.1	20.5	19.9	19.1
87.5°	7.5	7.7	7.7	7.3	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)