

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: P590398

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

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590398
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-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: 3732.0 lumens
Efficiency: N/A
Efficacy: 112.1 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

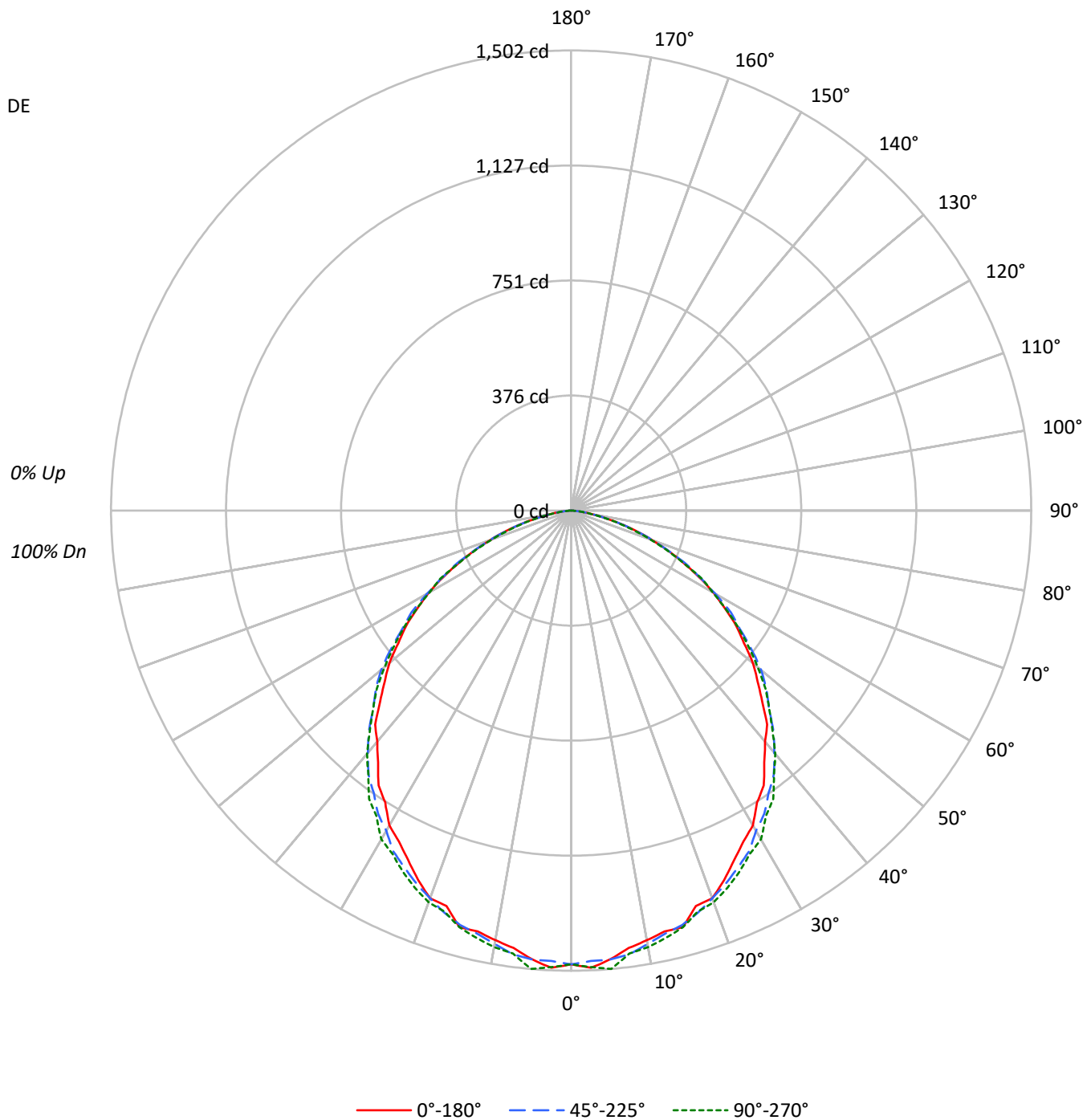
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																												
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°	3985	3985	3985
5°	3971	3973	4057
10°	3891	3925	3953
15°	3922	3901	3922
20°	3856	3856	3897
25°	3737	3819	3861
30°	3686	3750	3850
35°	3599	3693	3776
40°	3459	3625	3641
45°	3354	3473	3479
50°	3244	3391	3326
55°	3091	3151	3129
60°	2891	2919	2867
65°	2577	2643	2559
70°	2211	2219	2157
75°	1751	1748	1680
80°	1173	1141	1096
85°	636	633	590

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3563 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.3	3.7
10°-20°	394.8	10.6
20°-30°	591.4	15.8
30°-40°	701.0	18.8
40°-50°	702.3	18.8
50°-60°	596.1	16.0
60°-70°	401.9	10.8
70°-80°	176.6	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°	1125.5	30.2
0°-40°	1826.4	48.9
0°-60°	3124.8	83.7
0°-90°	3732.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3732.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1481	1481	1481	1481	1481	
5°	1470	1467	1471	1466	1502	139
15°	1408	1392	1400	1407	1408	392
25°	1259	1266	1286	1303	1300	582
35°	1096	1099	1124	1150	1149	680
45°	881	898	913	936	914	682
55°	659	654	672	667	667	586
65°	405	399	415	399	402	403
75°	168	165	168	156	162	180
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°	1480.8	1480.8	1480.8	1480.8	1480.8
2.5°	1493.6	1482.3	1471.8	1484.0	1491.5
5°	1470.2	1466.8	1470.8	1466.4	1501.8
7.5°	1440.0	1453.2	1460.9	1456.1	1458.2
10°	1424.0	1419.4	1436.4	1448.3	1446.5
12.5°	1406.8	1413.7	1414.6	1427.4	1428.6
15°	1407.7	1391.5	1400.1	1407.3	1407.9
17.5°	1353.0	1370.6	1376.6	1393.2	1372.6
20°	1346.4	1333.5	1346.4	1363.4	1360.7
22.5°	1305.3	1290.9	1318.4	1333.5	1332.6
25°	1258.6	1265.5	1286.1	1303.0	1300.3
27.5°	1217.7	1225.7	1255.2	1278.3	1263.4
30°	1186.1	1182.1	1207.0	1227.6	1239.1
32.5°	1129.7	1144.3	1173.3	1193.8	1182.9
35°	1095.5	1098.8	1124.2	1150.2	1149.4
37.5°	1035.7	1050.8	1086.5	1093.8	1087.1
40°	984.6	999.7	1032.0	1039.9	1036.6
42.5°	947.0	949.6	977.4	986.3	972.0
45°	881.4	897.8	912.7	936.3	914.1
47.5°	825.6	833.2	865.3	871.6	860.0
50°	774.9	777.6	809.9	802.0	794.4
52.5°	711.2	722.5	740.7	739.1	730.2
55°	658.8	654.4	671.6	667.1	666.9
57.5°	595.9	603.6	617.7	610.5	598.8
60°	537.1	537.2	542.4	534.2	532.7
62.5°	471.5	473.8	474.9	464.8	481.2
65°	404.7	399.4	415.1	399.2	401.9
67.5°	343.4	346.1	344.5	334.6	338.4
70°	281.0	284.5	282.0	270.7	274.2
72.5°	224.1	219.9	222.5	208.4	214.9
75°	168.4	165.0	168.1	156.2	161.6
77.5°	114.7	117.4	115.5	109.2	112.8
80°	75.7	73.6	73.6	70.0	70.7
82.5°	44.2	42.1	41.5	40.3	42.1
85°	20.6	20.1	20.5	19.9	19.1
87.5°	7.5	7.6	7.6	7.3	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)