

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: P590367

Luminaire Tested: FSR-24-2-LD4-2STD-40-UNV-81-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590367
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-40-UNV-81-86-EDD
Description: 2X2 FSR TROFFER WITH .156 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: 3629.0 lumens
Efficiency: N/A
Efficacy: 109.0 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

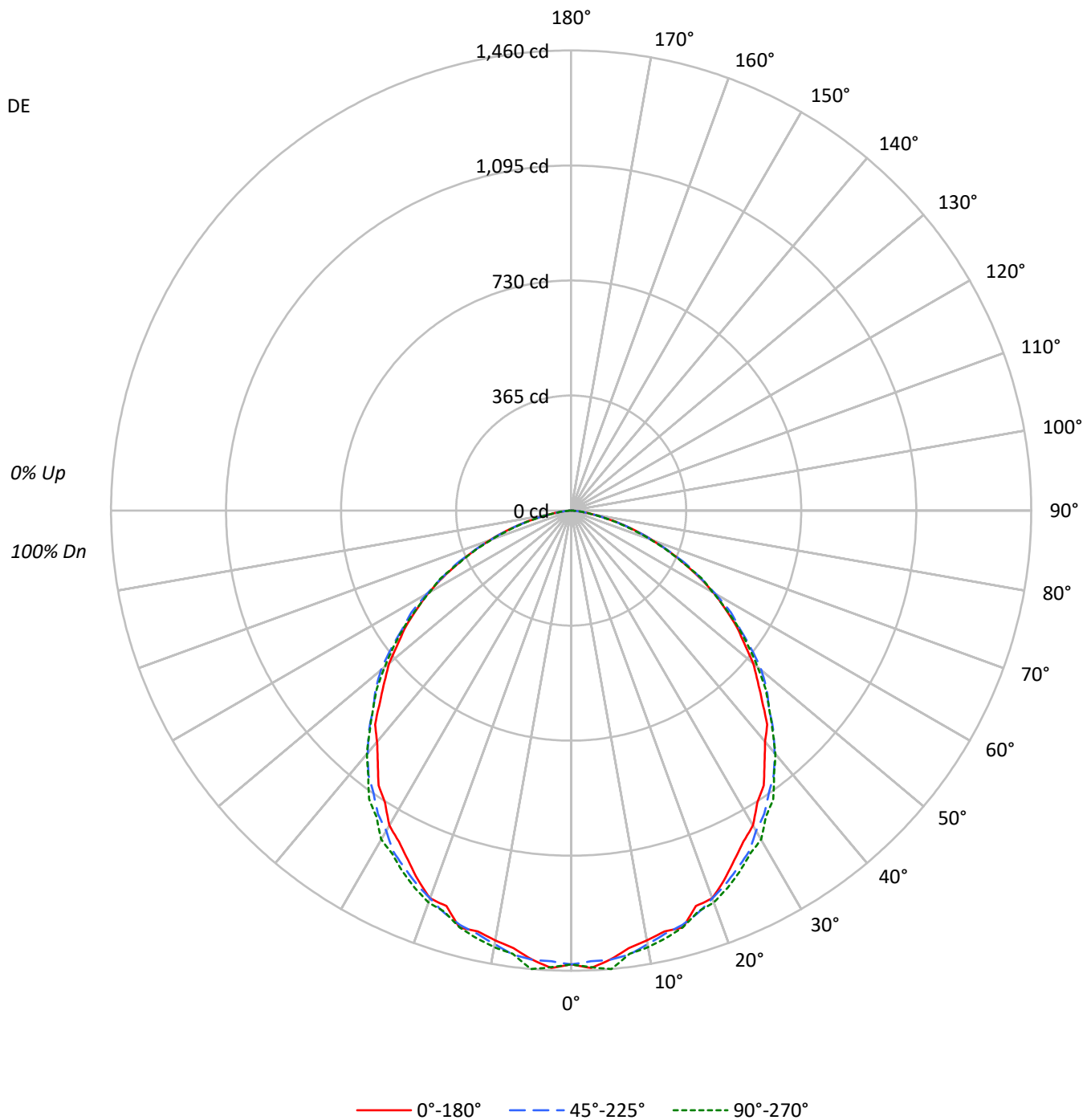
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3875	3875	3875
5°	3862	3863	3945
10°	3784	3817	3844
15°	3814	3793	3814
20°	3749	3749	3789
25°	3634	3713	3754
30°	3584	3647	3744
35°	3500	3591	3672
40°	3364	3525	3541
45°	3262	3377	3382
50°	3154	3297	3234
55°	3006	3064	3042
60°	2810	2838	2788
65°	2506	2570	2488
70°	2150	2157	2098
75°	1703	1699	1633
80°	1141	1110	1066
85°	621	614	574

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3465 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.4	3.7
10°-20°	383.9	10.6
20°-30°	575.1	15.8
30°-40°	681.6	18.8
40°-50°	682.9	18.8
50°-60°	579.7	16.0
60°-70°	390.8	10.8
70°-80°	171.7	4.7
80°-90°	27.9	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°	1094.4	30.2
0°-40°	1776.0	48.9
0°-60°	3038.6	83.7
0°-90°	3629.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3629.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1440	1440	1440	1440	1440	
5°	1430	1426	1430	1426	1460	135
15°	1369	1353	1361	1368	1369	381
25°	1224	1231	1251	1267	1264	566
35°	1065	1068	1093	1118	1118	661
45°	857	873	888	910	889	663
55°	641	636	653	649	648	570
65°	394	388	404	388	391	391
75°	164	160	163	152	157	176
85°	20	20	20	19	19	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1439.9	1439.9	1439.9	1439.9	1439.9
2.5°	1452.4	1441.4	1431.2	1443.1	1450.3
5°	1429.7	1426.3	1430.2	1426.0	1460.3
7.5°	1400.3	1413.1	1420.6	1415.9	1418.0
10°	1384.7	1380.2	1396.8	1408.3	1406.6
12.5°	1367.9	1374.6	1375.6	1388.0	1389.1
15°	1368.9	1353.1	1361.4	1368.5	1369.1
17.5°	1315.7	1332.8	1338.6	1354.7	1334.7
20°	1309.2	1296.7	1309.2	1325.7	1323.1
22.5°	1269.2	1255.3	1282.1	1296.7	1295.8
25°	1223.9	1230.6	1250.6	1267.0	1264.4
27.5°	1184.1	1191.9	1220.5	1243.0	1228.5
30°	1153.4	1149.5	1173.7	1193.7	1204.9
32.5°	1098.6	1112.7	1140.9	1160.8	1150.2
35°	1065.3	1068.4	1093.2	1118.5	1117.7
37.5°	1007.1	1021.8	1056.5	1063.6	1057.1
40°	957.5	972.1	1003.6	1011.2	1008.0
42.5°	920.8	923.4	950.4	959.1	945.2
45°	857.1	873.0	887.5	910.4	888.8
47.5°	802.8	810.2	841.4	847.6	836.2
50°	753.5	756.1	787.5	779.9	772.5
52.5°	691.6	702.6	720.2	718.7	710.0
55°	640.7	636.4	653.1	648.7	648.5
57.5°	579.5	586.9	600.7	593.6	582.3
60°	522.2	522.4	527.4	519.4	518.0
62.5°	458.5	460.7	461.8	452.0	467.9
65°	393.6	388.4	403.6	388.2	390.8
67.5°	333.9	336.5	335.0	325.3	329.1
70°	273.3	276.6	274.2	263.3	266.6
72.5°	217.9	213.8	216.4	202.6	209.0
75°	163.8	160.4	163.4	151.9	157.1
77.5°	111.5	114.2	112.3	106.2	109.7
80°	73.6	71.6	71.6	68.0	68.8
82.5°	42.9	40.9	40.3	39.2	40.9
85°	20.1	19.5	19.9	19.3	18.6
87.5°	7.3	7.4	7.4	7.1	6.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)