

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: P590359

Luminaire Tested: FSR-24-2-LD4-2STD-40-UNV-80-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590359
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-80-86-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3820.0 lumens
Efficiency: N/A
Efficacy: 114.7 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

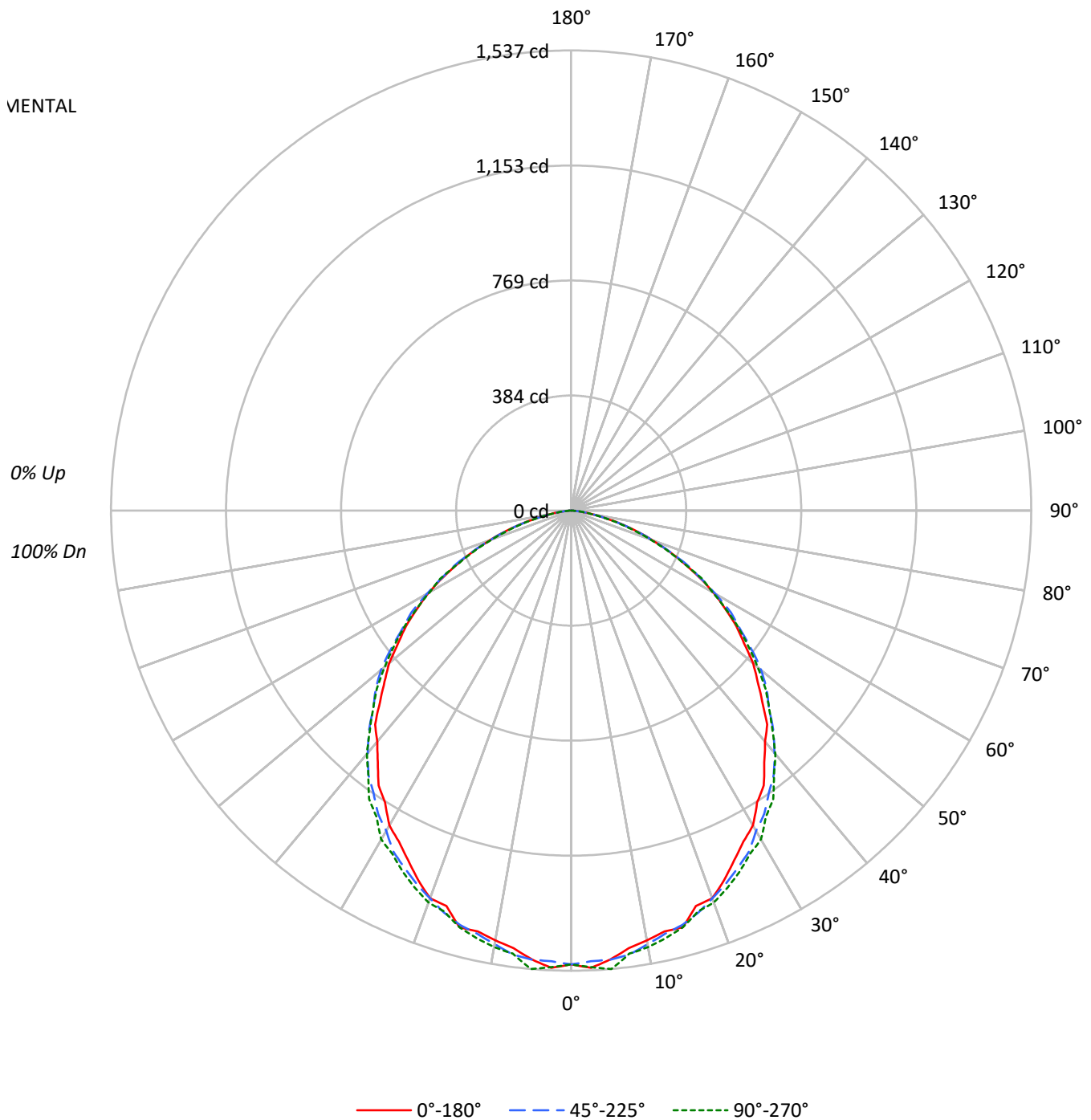
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4079	4079	4079
5°	4065	4067	4152
10°	3983	4018	4046
15°	4014	3992	4015
20°	3946	3946	3989
25°	3825	3909	3952
30°	3773	3839	3941
35°	3684	3780	3865
40°	3540	3711	3727
45°	3433	3556	3561
50°	3321	3471	3404
55°	3164	3225	3202
60°	2958	2988	2934
65°	2638	2706	2620
70°	2264	2271	2208
75°	1792	1788	1720
80°	1201	1167	1122
85°	651	645	605

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3647 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.6	3.7
10°-20°	404.1	10.6
20°-30°	605.4	15.8
30°-40°	717.5	18.8
40°-50°	718.8	18.8
50°-60°	610.2	16.0
60°-70°	411.4	10.8
70°-80°	180.8	4.7
80°-90°	29.4	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°	1152.0	30.2
0°-40°	1869.5	48.9
0°-60°	3198.5	83.7
0°-90°	3820.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3820.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1516	1516	1516	1516	1516	
5°	1505	1501	1506	1501	1537	142
15°	1441	1424	1433	1440	1441	401
25°	1288	1295	1316	1334	1331	596
35°	1121	1125	1151	1177	1176	696
45°	902	919	934	958	936	698
55°	674	670	688	683	683	600
65°	414	409	425	409	411	412
75°	172	169	172	160	165	185
85°	21	20	21	20	20	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1515.7	1515.7	1515.7	1515.7	1515.7
2.5°	1528.8	1517.2	1506.5	1519.0	1526.6
5°	1504.9	1501.4	1505.5	1501.0	1537.2
7.5°	1474.0	1487.5	1495.3	1490.4	1492.6
10°	1457.6	1452.9	1470.3	1482.4	1480.6
12.5°	1439.9	1447.0	1448.0	1461.1	1462.3
15°	1440.9	1424.3	1433.1	1440.5	1441.1
17.5°	1385.0	1403.0	1409.0	1426.0	1404.9
20°	1378.1	1365.0	1378.1	1395.5	1392.8
22.5°	1336.0	1321.4	1349.5	1365.0	1364.0
25°	1288.3	1295.3	1316.5	1333.7	1330.9
27.5°	1246.4	1254.6	1284.8	1308.4	1293.2
30°	1214.1	1210.0	1235.4	1256.6	1268.3
32.5°	1156.4	1171.3	1201.0	1221.9	1210.8
35°	1121.3	1124.7	1150.7	1177.3	1176.5
37.5°	1060.1	1075.6	1112.2	1119.6	1112.7
40°	1007.8	1023.3	1056.4	1064.4	1061.1
42.5°	969.3	972.0	1000.4	1009.6	994.9
45°	902.2	919.0	934.3	958.3	935.6
47.5°	845.0	852.9	885.7	892.2	880.2
50°	793.2	795.9	829.0	821.0	813.1
52.5°	728.0	739.5	758.1	756.6	747.4
55°	674.4	669.9	687.5	682.8	682.6
57.5°	610.0	617.8	632.3	624.9	612.9
60°	549.7	549.9	555.2	546.8	545.2
62.5°	482.6	484.9	486.1	475.7	492.6
65°	414.3	408.8	424.9	408.6	411.4
67.5°	351.5	354.2	352.6	342.5	346.4
70°	287.7	291.2	288.7	277.1	280.6
72.5°	229.4	225.1	227.8	213.3	220.0
75°	172.4	168.9	172.0	159.9	165.4
77.5°	117.4	120.2	118.2	111.7	115.5
80°	77.5	75.3	75.3	71.6	72.4
82.5°	45.2	43.1	42.5	41.3	43.1
85°	21.1	20.5	20.9	20.4	19.6
87.5°	7.6	7.8	7.8	7.4	7.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)