

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: P590333

Luminaire Tested: FSR-24-2-LD4-2STD-35-UNV-81-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590333
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-81-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3707.0 lumens
Efficiency: N/A
Efficacy: 111.3 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

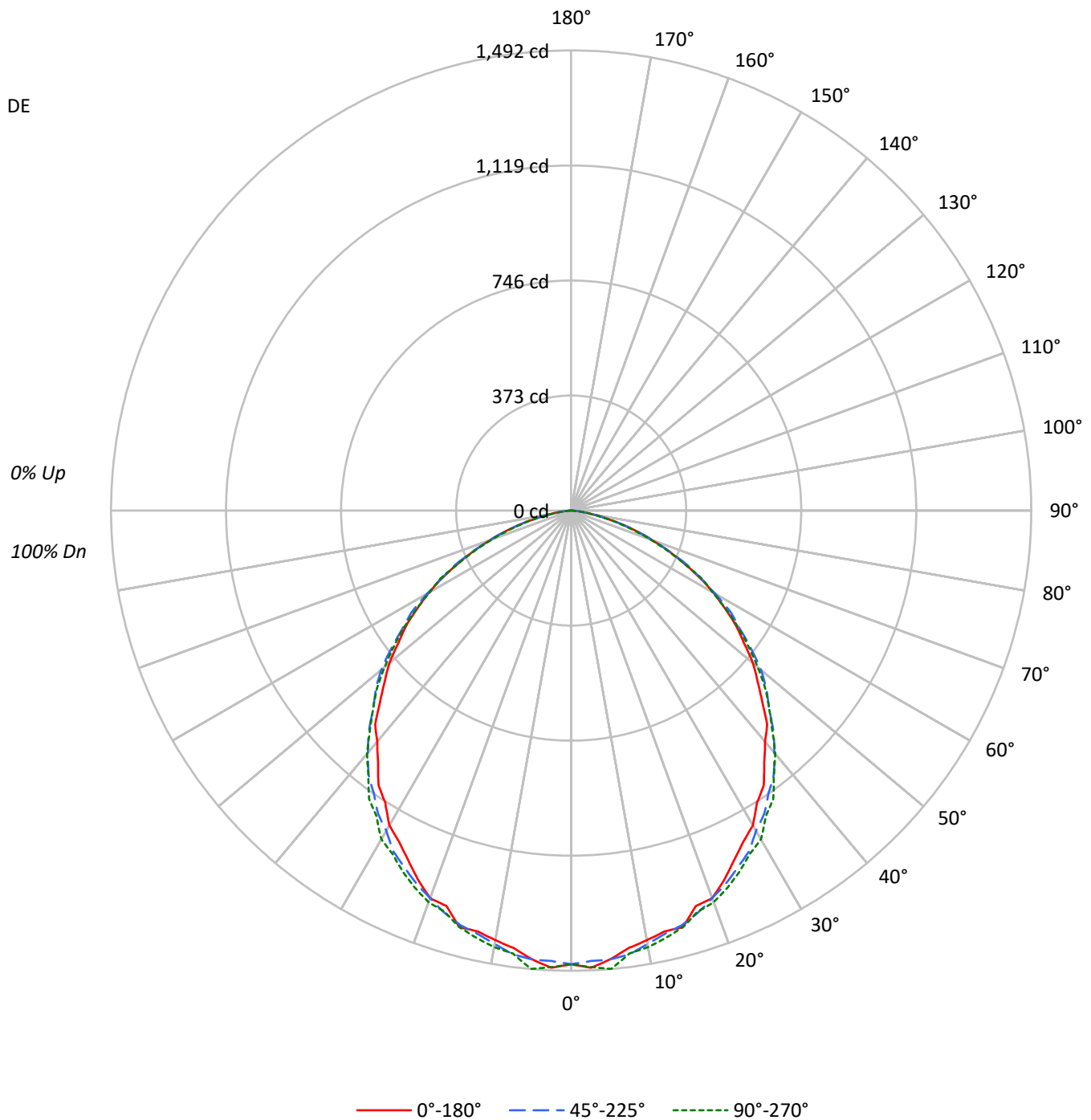
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3958	3958	3958
5°	3945	3947	4029
10°	3865	3899	3926
15°	3896	3874	3896
20°	3830	3830	3871
25°	3712	3793	3835
30°	3661	3725	3824
35°	3575	3668	3751
40°	3436	3601	3617
45°	3332	3450	3456
50°	3222	3368	3304
55°	3070	3130	3108
60°	2871	2900	2848
65°	2560	2625	2542
70°	2197	2204	2142
75°	1739	1735	1669
80°	1165	1133	1089
85°	633	627	587

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3539 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.4	3.7
10°-20°	392.1	10.6
20°-30°	587.5	15.8
30°-40°	696.3	18.8
40°-50°	697.6	18.8
50°-60°	592.1	16.0
60°-70°	399.2	10.8
70°-80°	175.4	4.7
80°-90°	28.5	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°	1117.9	30.2
0°-40°	1814.2	48.9
0°-60°	3103.9	83.7
0°-90°	3707.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3707.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1471	1471	1471	1471	1471	
5°	1460	1457	1461	1457	1492	138
15°	1398	1382	1391	1398	1398	390
25°	1250	1257	1278	1294	1292	578
35°	1088	1091	1117	1142	1142	676
45°	876	892	907	930	908	677
55°	654	650	667	663	662	582
65°	402	397	412	396	399	400
75°	167	164	167	155	160	179
85°	20	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°	1470.8	1470.8	1470.8	1470.8	1470.8
2.5°	1483.6	1472.4	1461.9	1474.1	1481.5
5°	1460.4	1457.0	1461.0	1456.6	1491.7
7.5°	1430.4	1443.5	1451.1	1446.3	1448.4
10°	1414.4	1409.9	1426.8	1438.6	1436.9
12.5°	1397.3	1404.2	1405.1	1417.9	1419.0
15°	1398.3	1382.2	1390.7	1397.9	1398.5
17.5°	1344.0	1361.5	1367.3	1383.9	1363.4
20°	1337.3	1324.6	1337.3	1354.2	1351.6
22.5°	1296.5	1282.3	1309.6	1324.6	1323.7
25°	1250.2	1257.0	1277.5	1294.2	1291.6
27.5°	1209.5	1217.5	1246.8	1269.7	1254.9
30°	1178.2	1174.2	1198.9	1219.4	1230.8
32.5°	1122.2	1136.6	1165.5	1185.8	1175.0
35°	1088.2	1091.4	1116.7	1142.5	1141.7
37.5°	1028.7	1043.7	1079.3	1086.5	1079.8
40°	978.0	993.0	1025.1	1032.9	1029.7
42.5°	940.6	943.3	970.8	979.7	965.5
45°	875.5	891.8	906.6	930.0	908.0
47.5°	820.0	827.6	859.5	865.8	854.2
50°	769.7	772.4	804.5	796.7	789.1
52.5°	706.5	717.7	735.7	734.2	725.3
55°	654.4	650.1	667.1	662.6	662.4
57.5°	591.9	599.5	613.6	606.4	594.8
60°	533.5	533.6	538.8	530.6	529.1
62.5°	468.3	470.6	471.7	461.7	478.0
65°	402.0	396.7	412.3	396.5	399.2
67.5°	341.1	343.7	342.2	332.3	336.1
70°	279.2	282.6	280.1	268.9	272.3
72.5°	222.6	218.4	221.1	207.0	213.5
75°	167.3	163.9	166.9	155.2	160.5
77.5°	113.9	116.6	114.7	108.4	112.0
80°	75.2	73.1	73.1	69.5	70.3
82.5°	43.9	41.8	41.2	40.1	41.8
85°	20.5	19.9	20.3	19.8	19.0
87.5°	7.4	7.6	7.6	7.2	6.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)