

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: P590327

Luminaire Tested: FSR-24-2-LD4-2STD-35-UNV-80-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590327
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-80-86-EDD
Description: 2X2 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .250 CLEAR PC ENVIRON
SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3782.0 lumens
Efficiency: N/A
Efficacy: 113.6 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

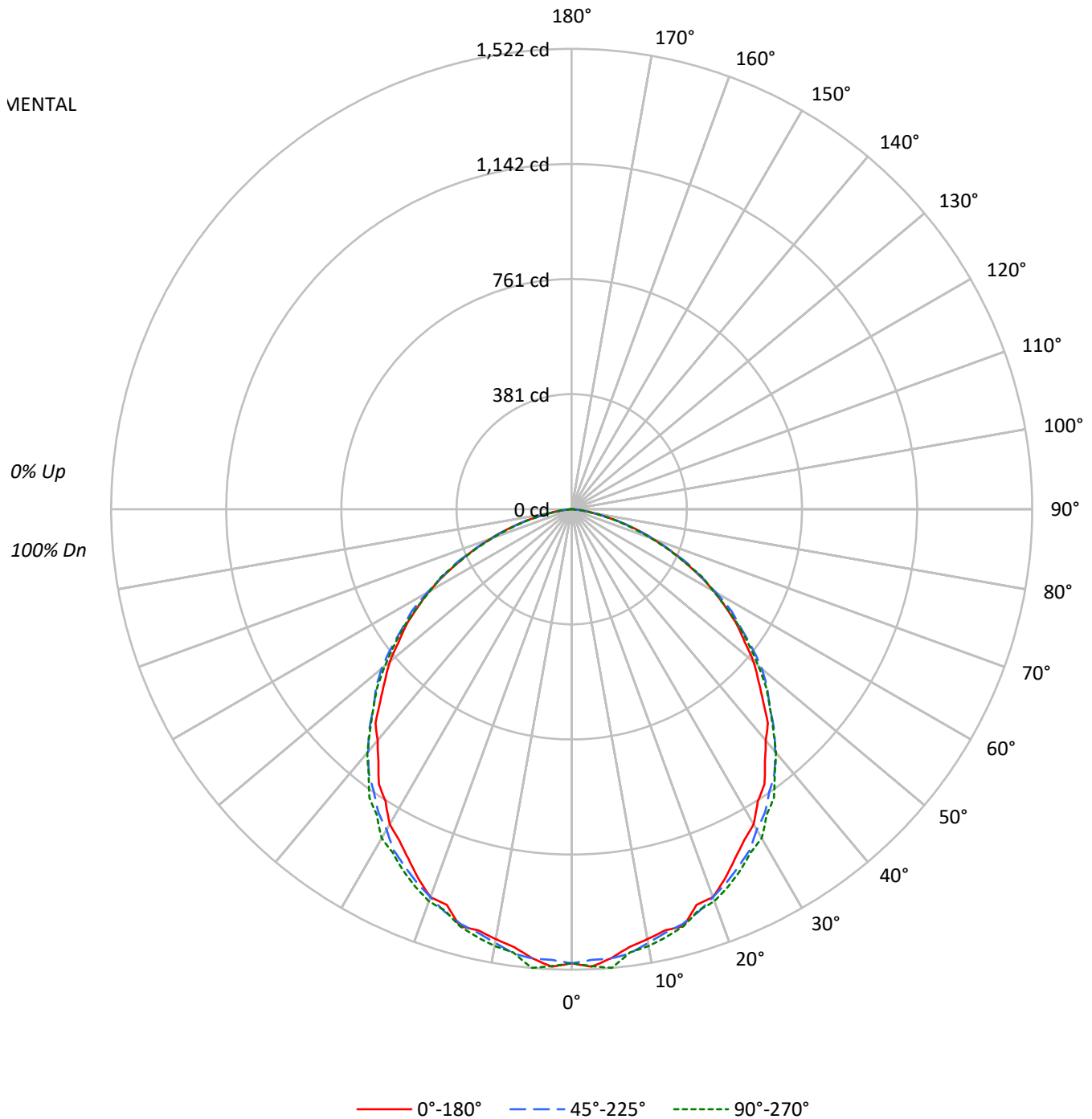
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4038	4038	4038
5°	4025	4026	4111
10°	3943	3978	4006
15°	3974	3953	3975
20°	3907	3907	3949
25°	3787	3870	3912
30°	3735	3801	3902
35°	3647	3743	3826
40°	3505	3674	3690
45°	3399	3520	3525
50°	3288	3436	3370
55°	3133	3193	3171
60°	2929	2958	2905
65°	2612	2678	2593
70°	2241	2249	2186
75°	1775	1771	1702
80°	1189	1156	1111
85°	645	639	599

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3611 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.2	3.7
10°-20°	400.0	10.6
20°-30°	599.4	15.8
30°-40°	710.4	18.8
40°-50°	711.7	18.8
50°-60°	604.1	16.0
60°-70°	407.3	10.8
70°-80°	179.0	4.7
80°-90°	29.1	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°	1140.6	30.2
0°-40°	1850.9	48.9
0°-60°	3166.7	83.7
0°-90°	3782.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3782.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1501	1501	1501	1501	1501	
5°	1490	1486	1490	1486	1522	140
15°	1427	1410	1419	1426	1427	397
25°	1276	1282	1303	1320	1318	590
35°	1110	1114	1139	1166	1165	689
45°	893	910	925	949	926	691
55°	668	663	681	676	676	594
65°	410	405	421	405	407	408
75°	171	167	170	158	164	183
85°	21	20	21	20	19	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1500.6	1500.6	1500.6	1500.6	1500.6
2.5°	1513.6	1502.2	1491.5	1503.9	1511.5
5°	1489.9	1486.5	1490.5	1486.1	1521.9
7.5°	1459.3	1472.7	1480.5	1475.6	1477.7
10°	1443.1	1438.4	1455.7	1467.7	1465.9
12.5°	1425.6	1432.6	1433.6	1446.5	1447.7
15°	1426.6	1410.1	1418.8	1426.2	1426.8
17.5°	1371.2	1389.0	1395.0	1411.9	1390.9
20°	1364.4	1351.4	1364.4	1381.6	1378.9
22.5°	1322.7	1308.2	1336.1	1351.4	1350.4
25°	1275.5	1282.4	1303.4	1320.4	1317.7
27.5°	1234.0	1242.1	1272.0	1295.4	1280.3
30°	1202.0	1198.0	1223.2	1244.1	1255.7
32.5°	1144.9	1159.6	1189.1	1209.8	1198.7
35°	1110.2	1113.5	1139.3	1165.6	1164.8
37.5°	1049.5	1064.9	1101.1	1108.4	1101.7
40°	997.8	1013.1	1045.9	1053.8	1050.5
42.5°	959.6	962.4	990.5	999.6	985.0
45°	893.2	909.9	925.0	948.8	926.3
47.5°	836.6	844.4	876.9	883.3	871.5
50°	785.3	788.0	820.7	812.8	805.0
52.5°	720.8	732.2	750.6	749.0	739.9
55°	667.7	663.2	680.6	676.0	675.8
57.5°	603.9	611.7	626.0	618.6	606.8
60°	544.2	544.4	549.7	541.3	539.8
62.5°	477.8	480.1	481.3	471.0	487.7
65°	410.2	404.7	420.6	404.6	407.3
67.5°	348.0	350.7	349.1	339.1	342.9
70°	284.8	288.3	285.8	274.4	277.8
72.5°	227.1	222.8	225.5	211.2	217.8
75°	170.7	167.2	170.3	158.3	163.7
77.5°	116.3	119.0	117.0	110.6	114.3
80°	76.7	74.6	74.6	70.9	71.7
82.5°	44.8	42.6	42.0	40.9	42.6
85°	20.9	20.3	20.7	20.2	19.4
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)