

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: P590534

Luminaire Tested: FSR-24-2-LD4-3LO-35-UNV-82-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590534
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-LD4-3LO-35-UNV-82-85-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3984.0 lumens
Efficiency: N/A
Efficacy: 113.5 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

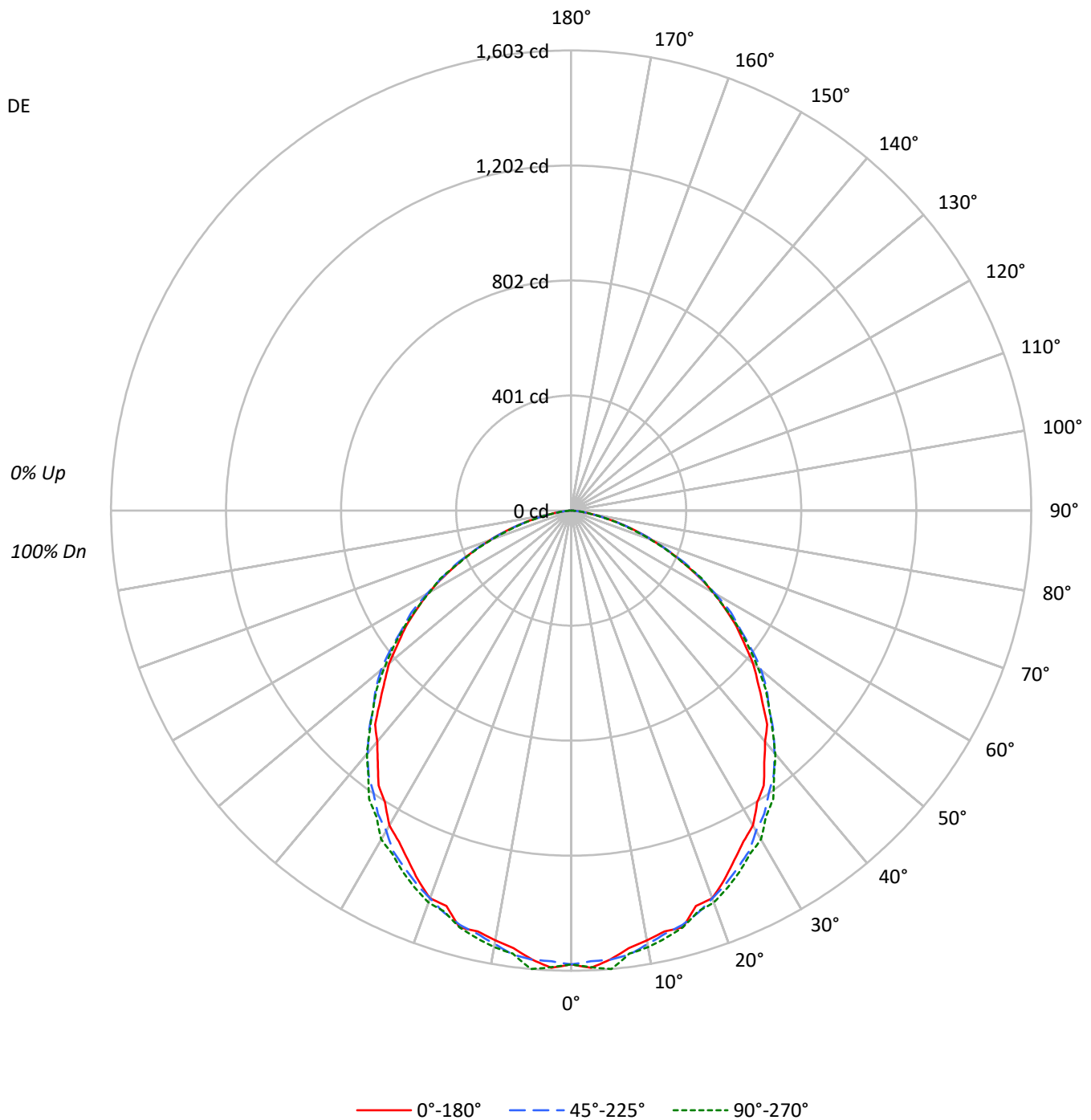
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	4254	4254	4254
5°	4240	4241	4331
10°	4154	4190	4220
15°	4187	4164	4187
20°	4116	4116	4160
25°	3989	4077	4122
30°	3934	4004	4110
35°	3842	3942	4031
40°	3692	3870	3887
45°	3581	3708	3714
50°	3463	3620	3550
55°	3300	3364	3340
60°	3085	3116	3060
65°	2751	2821	2732
70°	2360	2368	2303
75°	1869	1865	1794
80°	1252	1218	1170
85°	679	673	630

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3804 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.7	3.7
10°-20°	421.4	10.6
20°-30°	631.4	15.8
30°-40°	748.3	18.8
40°-50°	749.7	18.8
50°-60°	636.4	16.0
60°-70°	429.0	10.8
70°-80°	188.5	4.7
80°-90°	30.6	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°	1201.5	30.2
0°-40°	1949.8	48.9
0°-60°	3335.8	83.7
0°-90°	3984.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3984.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1581	1581	1581	1581	1581	
5°	1570	1566	1570	1565	1603	148
15°	1503	1485	1495	1502	1503	419
25°	1344	1351	1373	1391	1388	621
35°	1170	1173	1200	1228	1227	726
45°	941	958	974	1000	976	728
55°	703	699	717	712	712	626
65°	432	426	443	426	429	430
75°	180	176	179	167	172	193
85°	22	21	22	21	20	32
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1580.8	1580.8	1580.8	1580.8	1580.8
2.5°	1594.4	1582.4	1571.2	1584.2	1592.2
5°	1569.5	1565.9	1570.1	1565.4	1603.2
7.5°	1537.3	1551.4	1559.5	1554.4	1556.7
10°	1520.1	1515.2	1533.4	1546.1	1544.2
12.5°	1501.8	1509.1	1510.1	1523.8	1525.0
15°	1502.8	1485.4	1494.6	1502.4	1503.0
17.5°	1444.4	1463.2	1469.5	1487.3	1465.2
20°	1437.3	1423.6	1437.3	1455.4	1452.6
22.5°	1393.4	1378.1	1407.5	1423.6	1422.6
25°	1343.6	1350.9	1373.0	1390.9	1388.1
27.5°	1299.9	1308.5	1339.9	1364.6	1348.7
30°	1266.2	1261.9	1288.5	1310.5	1322.8
32.5°	1206.0	1221.5	1252.6	1274.4	1262.8
35°	1169.5	1173.0	1200.1	1227.9	1227.0
37.5°	1105.6	1121.7	1159.9	1167.7	1160.5
40°	1051.1	1067.2	1101.7	1110.1	1106.6
42.5°	1010.9	1013.8	1043.4	1052.9	1037.6
45°	940.9	958.5	974.4	999.5	975.8
47.5°	881.3	889.5	923.8	930.5	918.0
50°	827.2	830.1	864.6	856.2	848.0
52.5°	759.3	771.3	790.7	789.0	779.5
55°	703.3	698.6	717.0	712.1	711.9
57.5°	636.2	644.3	659.4	651.7	639.2
60°	573.3	573.5	579.0	570.3	568.6
62.5°	503.3	505.8	507.0	496.2	513.7
65°	432.1	426.4	443.1	426.2	429.0
67.5°	366.6	369.4	367.8	357.2	361.3
70°	300.0	303.7	301.0	289.0	292.7
72.5°	239.2	234.7	237.6	222.5	229.4
75°	179.8	176.1	179.4	166.7	172.5
77.5°	122.5	125.3	123.3	116.5	120.4
80°	80.8	78.6	78.6	74.7	75.5
82.5°	47.1	44.9	44.3	43.1	44.9
85°	22.0	21.4	21.8	21.2	20.4
87.5°	8.0	8.2	8.2	7.8	7.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)