

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: P590528

Luminaire Tested: FSR-24-2-LD4-3LO-35-UNV-81-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590528
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-81-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3894.0 lumens
Efficiency: N/A
Efficacy: 110.9 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

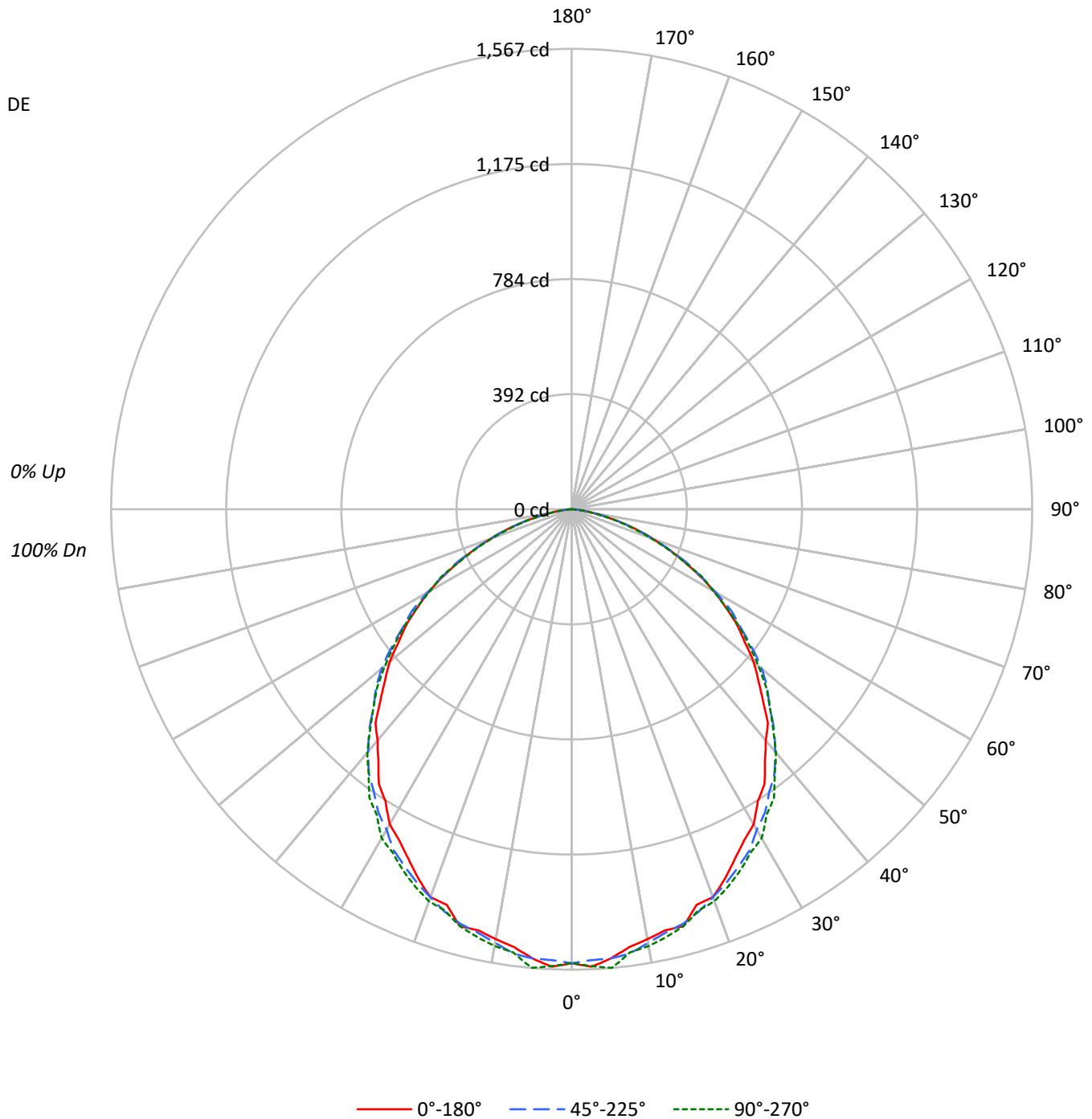
Input Watts (W): 35.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	4158	4158	4158
5°	4144	4146	4233
10°	4060	4095	4124
15°	4092	4070	4092
20°	4023	4023	4066
25°	3899	3985	4028
30°	3846	3913	4017
35°	3755	3853	3940
40°	3609	3783	3799
45°	3500	3624	3630
50°	3385	3538	3470
55°	3225	3288	3264
60°	3016	3046	2991
65°	2689	2758	2670
70°	2307	2315	2251
75°	1827	1824	1753
80°	1224	1190	1144
85°	664	658	614

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 3718 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.3	3.7
10°-20°	411.9	10.6
20°-30°	617.1	15.8
30°-40°	731.4	18.8
40°-50°	732.8	18.8
50°-60°	622.0	16.0
60°-70°	419.3	10.8
70°-80°	184.3	4.7
80°-90°	29.9	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°	1174.3	30.2
0°-40°	1905.7	48.9
0°-60°	3260.5	83.7
0°-90°	3894.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3894.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1545	1545	1545	1545	1545	
5°	1534	1530	1535	1530	1567	145
15°	1469	1452	1461	1468	1469	409
25°	1313	1320	1342	1360	1357	607
35°	1143	1146	1173	1200	1199	710
45°	920	937	952	977	954	711
55°	687	683	701	696	696	612
65°	422	417	433	416	419	420
75°	176	172	175	163	169	188
85°	22	21	21	21	20	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1545.0	1545.0	1545.0	1545.0	1545.0
2.5°	1558.4	1546.6	1535.7	1548.4	1556.2
5°	1534.1	1530.5	1534.7	1530.1	1567.0
7.5°	1502.5	1516.3	1524.3	1519.3	1521.5
10°	1485.8	1481.0	1498.8	1511.1	1509.3
12.5°	1467.8	1475.0	1476.0	1489.4	1490.6
15°	1468.8	1451.9	1460.9	1468.4	1469.0
17.5°	1411.8	1430.1	1436.3	1453.7	1432.1
20°	1404.8	1391.4	1404.8	1422.6	1419.8
22.5°	1361.9	1346.9	1375.7	1391.4	1390.4
25°	1313.2	1320.4	1342.0	1359.5	1356.7
27.5°	1270.5	1278.9	1309.6	1333.8	1318.2
30°	1237.6	1233.4	1259.4	1280.9	1292.9
32.5°	1178.8	1193.9	1224.3	1245.6	1234.2
35°	1143.1	1146.5	1173.0	1200.1	1199.3
37.5°	1080.6	1096.4	1133.7	1141.3	1134.3
40°	1027.4	1043.1	1076.8	1085.0	1081.6
42.5°	988.1	990.9	1019.8	1029.2	1014.2
45°	919.6	936.8	952.4	976.9	953.8
47.5°	861.4	869.4	902.9	909.5	897.3
50°	808.5	811.3	845.0	836.9	828.9
52.5°	742.1	753.9	772.8	771.2	761.8
55°	687.4	682.9	700.8	696.0	695.8
57.5°	621.8	629.8	644.5	637.0	624.8
60°	560.4	560.6	565.9	557.4	555.8
62.5°	491.9	494.3	495.5	485.0	502.1
65°	422.3	416.7	433.1	416.5	419.3
67.5°	358.3	361.1	359.5	349.1	353.1
70°	293.2	296.8	294.2	282.5	286.1
72.5°	233.8	229.4	232.2	217.4	224.2
75°	175.7	172.2	175.4	163.0	168.6
77.5°	119.7	122.5	120.5	113.9	117.7
80°	79.0	76.8	76.8	73.0	73.8
82.5°	46.1	43.9	43.3	42.1	43.9
85°	21.5	20.9	21.3	20.7	19.9
87.5°	7.8	8.0	8.0	7.6	7.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)