

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: P590415

Luminaire Tested: FSR-24-2-LD4-2STD-50-UNV-93-86-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590415
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-50-UNV-93-86-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .250 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3892.0 lumens
Efficiency: N/A
Efficacy: 116.9 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

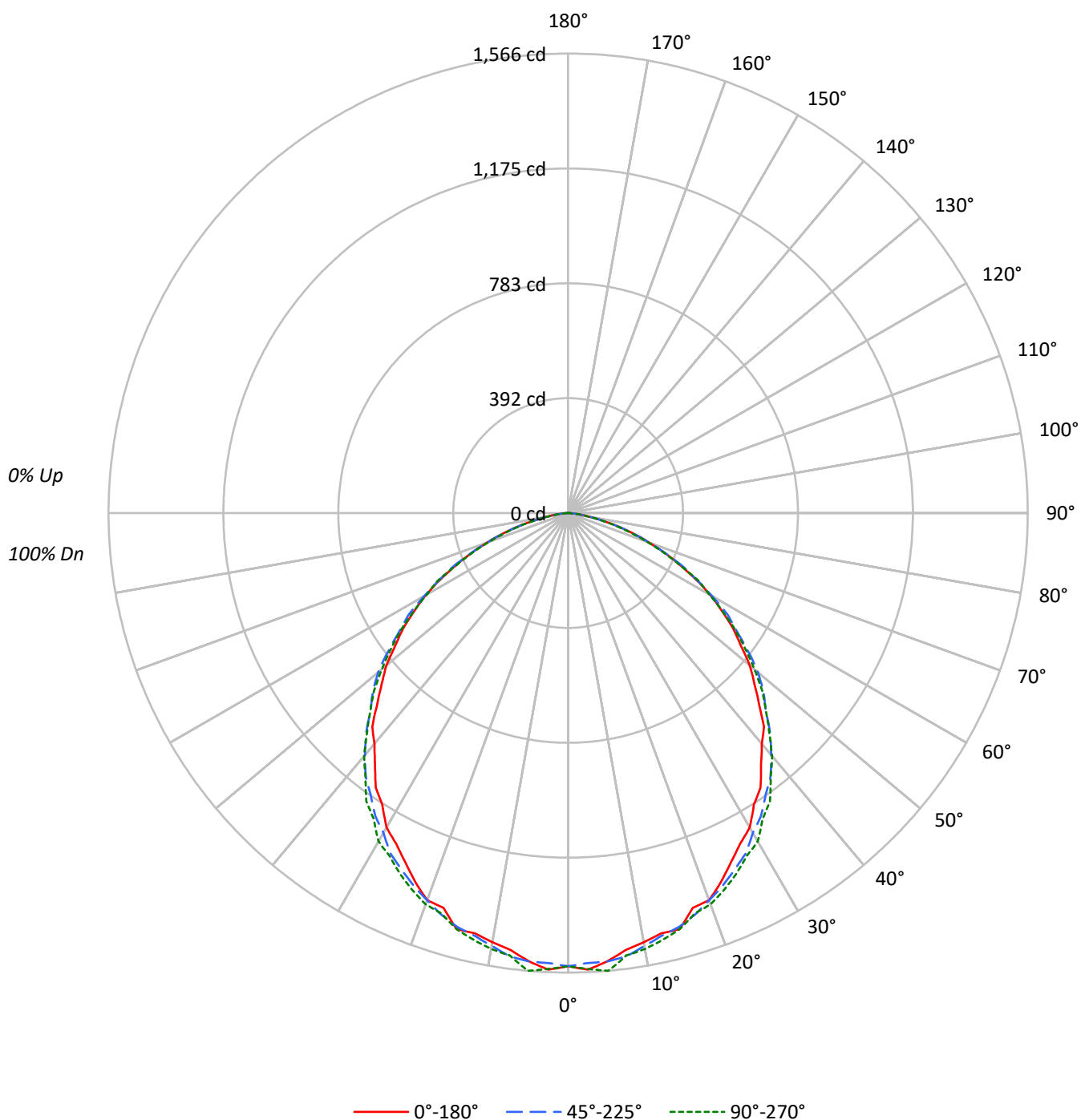
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P590415

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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
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°	4155	4155	4155
5°	4142	4143	4231
10°	4058	4093	4122
15°	4090	4068	4091
20°	4021	4021	4064
25°	3897	3983	4026
30°	3844	3911	4015
35°	3753	3851	3938
40°	3607	3781	3798
45°	3498	3623	3628
50°	3383	3536	3468
55°	3224	3286	3263
60°	3014	3045	2990
65°	2688	2756	2669
70°	2306	2314	2249
75°	1827	1823	1752
80°	1224	1190	1144
85°	664	658	614

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 3716 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.3	3.7
10°-20°	411.7	10.6
20°-30°	616.8	15.8
30°-40°	731.0	18.8
40°-50°	732.4	18.8
50°-60°	621.7	16.0
60°-70°	419.1	10.8
70°-80°	184.2	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°	1173.7	30.2
0°-40°	1904.8	48.9
0°-60°	3258.8	83.7
0°-90°	3892.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3892.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1544	1544	1544	1544	1544	
5°	1533	1530	1534	1529	1566	145
15°	1468	1451	1460	1468	1468	409
25°	1313	1320	1341	1359	1356	607
35°	1142	1146	1172	1200	1199	709
45°	919	936	952	976	953	711
55°	687	682	700	696	696	611
65°	422	416	433	416	419	420
75°	176	172	175	163	168	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°	1544.2	1544.2	1544.2	1544.2	1544.2
2.5°	1557.6	1545.8	1534.9	1547.6	1555.4
5°	1533.3	1529.7	1533.9	1529.3	1566.2
7.5°	1501.8	1515.5	1523.5	1518.5	1520.7
10°	1485.0	1480.2	1498.0	1510.4	1508.6
12.5°	1467.1	1474.3	1475.3	1488.6	1489.8
15°	1468.1	1451.1	1460.1	1467.7	1468.3
17.5°	1411.1	1429.4	1435.6	1452.9	1431.4
20°	1404.1	1390.7	1404.1	1421.8	1419.0
22.5°	1361.2	1346.3	1375.0	1390.7	1389.7
25°	1312.6	1319.7	1341.3	1358.8	1356.0
27.5°	1269.9	1278.3	1309.0	1333.1	1317.5
30°	1237.0	1232.8	1258.7	1280.3	1292.2
32.5°	1178.2	1193.3	1223.6	1245.0	1233.6
35°	1142.5	1145.9	1172.4	1199.5	1198.7
37.5°	1080.1	1095.8	1133.1	1140.7	1133.7
40°	1026.8	1042.6	1076.3	1084.5	1081.1
42.5°	987.6	990.4	1019.3	1028.6	1013.7
45°	919.2	936.3	951.9	976.4	953.3
47.5°	861.0	868.9	902.4	909.0	896.8
50°	808.1	810.9	844.6	836.4	828.5
52.5°	741.7	753.5	772.4	770.8	761.5
55°	687.1	682.5	700.4	695.7	695.5
57.5°	621.5	629.5	644.2	636.6	624.5
60°	560.1	560.3	565.7	557.1	555.5
62.5°	491.7	494.1	495.3	484.7	501.9
65°	422.1	416.5	432.9	416.3	419.1
67.5°	358.1	360.9	359.3	348.9	352.9
70°	293.1	296.7	294.1	282.3	285.9
72.5°	233.7	229.3	232.1	217.3	224.1
75°	175.7	172.1	175.3	162.9	168.5
77.5°	119.6	122.4	120.4	113.8	117.6
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)