

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: P590285

Luminaire Tested: FSR-24-2-LD4-2LO-40-UNV-93-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590285
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-LD4-2LO-40-UNV-93-84-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2949.0 lumens
Efficiency: N/A
Efficacy: 126.0 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

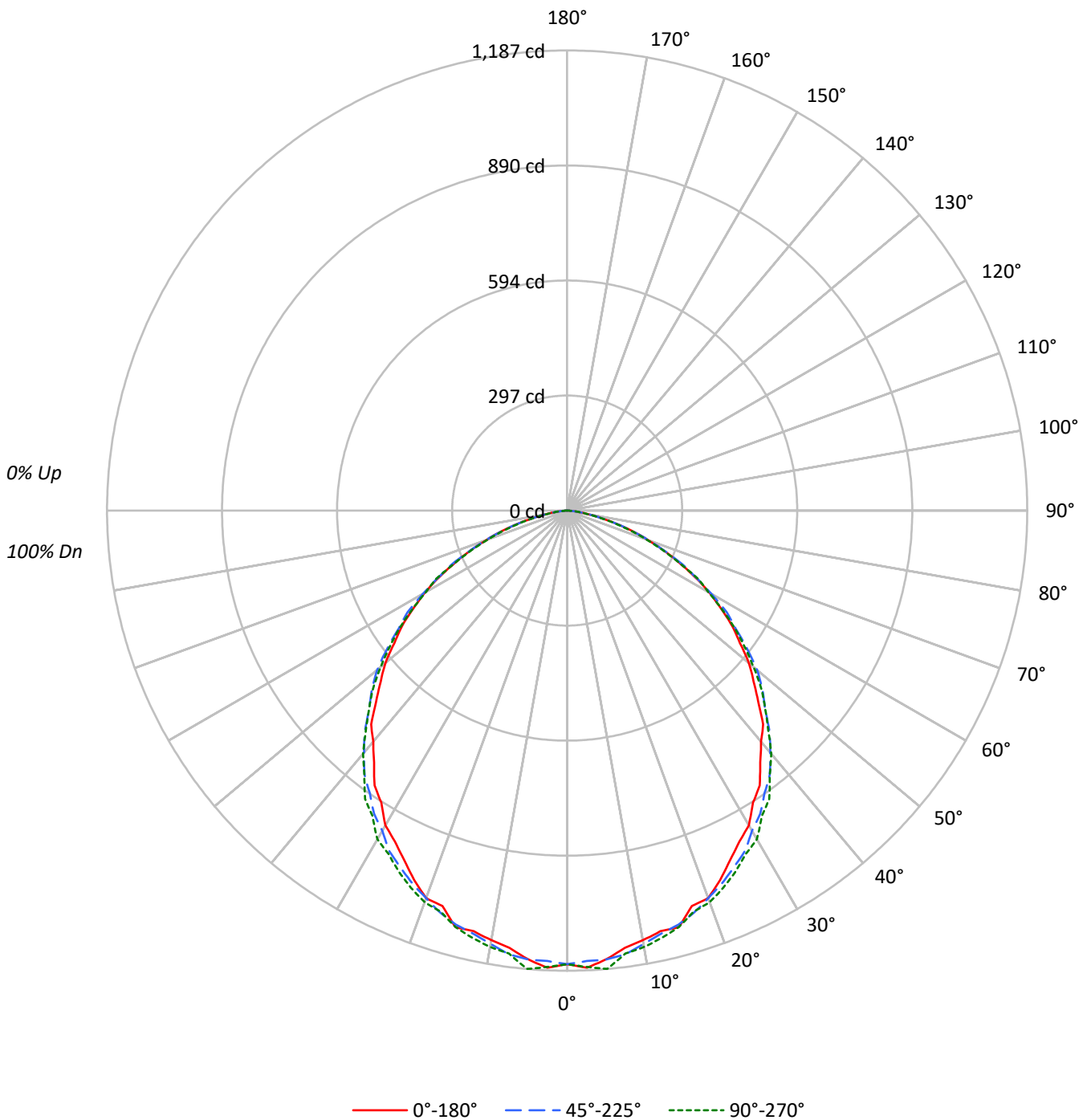
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	3149	3149	3149
5°	3138	3139	3206
10°	3075	3101	3123
15°	3099	3082	3099
20°	3047	3047	3079
25°	2953	3018	3051
30°	2912	2963	3042
35°	2844	2918	2984
40°	2733	2865	2877
45°	2651	2745	2749
50°	2563	2679	2628
55°	2442	2490	2472
60°	2284	2307	2265
65°	2036	2089	2022
70°	1747	1753	1704
75°	1384	1381	1328
80°	927	902	866
85°	503	500	466

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2815 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.1	3.7
10°-20°	311.9	10.6
20°-30°	467.3	15.8
30°-40°	553.9	18.8
40°-50°	554.9	18.8
50°-60°	471.0	16.0
60°-70°	317.6	10.8
70°-80°	139.6	4.7
80°-90°	22.7	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°	889.3	30.2
0°-40°	1443.2	48.9
0°-60°	2469.2	83.7
0°-90°	2949.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2949.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1170	1170	1170	1170	1170	
5°	1162	1159	1162	1159	1187	110
15°	1112	1100	1106	1112	1112	310
25°	994	1000	1016	1030	1028	460
35°	866	868	888	909	908	537
45°	696	710	721	740	722	539
55°	521	517	531	527	527	463
65°	320	316	328	315	318	318
75°	133	130	133	123	128	143
85°	16	16	16	16	15	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1170.1	1170.1	1170.1	1170.1	1170.1
2.5°	1180.2	1171.3	1163.0	1172.7	1178.5
5°	1161.8	1159.1	1162.2	1158.8	1186.7
7.5°	1137.9	1148.3	1154.4	1150.6	1152.3
10°	1125.2	1121.6	1135.0	1144.4	1143.0
12.5°	1111.6	1117.1	1117.8	1127.9	1128.8
15°	1112.4	1099.5	1106.3	1112.1	1112.5
17.5°	1069.2	1083.1	1087.8	1100.9	1084.6
20°	1063.9	1053.8	1063.9	1077.3	1075.2
22.5°	1031.4	1020.1	1041.8	1053.8	1053.0
25°	994.5	1000.0	1016.3	1029.6	1027.5
27.5°	962.2	968.6	991.8	1010.1	998.3
30°	937.3	934.1	953.7	970.1	979.1
32.5°	892.7	904.2	927.2	943.3	934.7
35°	865.7	868.2	888.3	908.9	908.3
37.5°	818.4	830.3	858.6	864.3	859.0
40°	778.0	790.0	815.5	821.7	819.1
42.5°	748.3	750.4	772.3	779.4	768.1
45°	696.5	709.5	721.2	739.8	722.3
47.5°	652.3	658.4	683.8	688.8	679.5
50°	612.3	614.4	640.0	633.8	627.7
52.5°	562.0	570.9	585.3	584.1	577.0
55°	520.6	517.1	530.7	527.1	527.0
57.5°	470.9	476.9	488.1	482.4	473.2
60°	424.4	424.5	428.6	422.1	420.9
62.5°	372.6	374.4	375.3	367.3	380.3
65°	319.8	315.6	328.0	315.4	317.6
67.5°	271.3	273.4	272.2	264.4	267.4
70°	222.1	224.8	222.8	213.9	216.6
72.5°	177.1	173.7	175.9	164.7	169.8
75°	133.1	130.4	132.8	123.4	127.7
77.5°	90.6	92.8	91.3	86.3	89.1
80°	59.8	58.2	58.2	55.3	55.9
82.5°	34.9	33.2	32.8	31.9	33.2
85°	16.3	15.9	16.2	15.7	15.1
87.5°	5.9	6.0	6.0	5.7	5.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)