

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: P590078

Luminaire Tested: FSR-24-2-LD4-1STD-40-UNV-81-85-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590078
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-LD4-1STD-40-UNV-81-85-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1835.0 lumens
Efficiency: N/A
Efficacy: 110.5 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

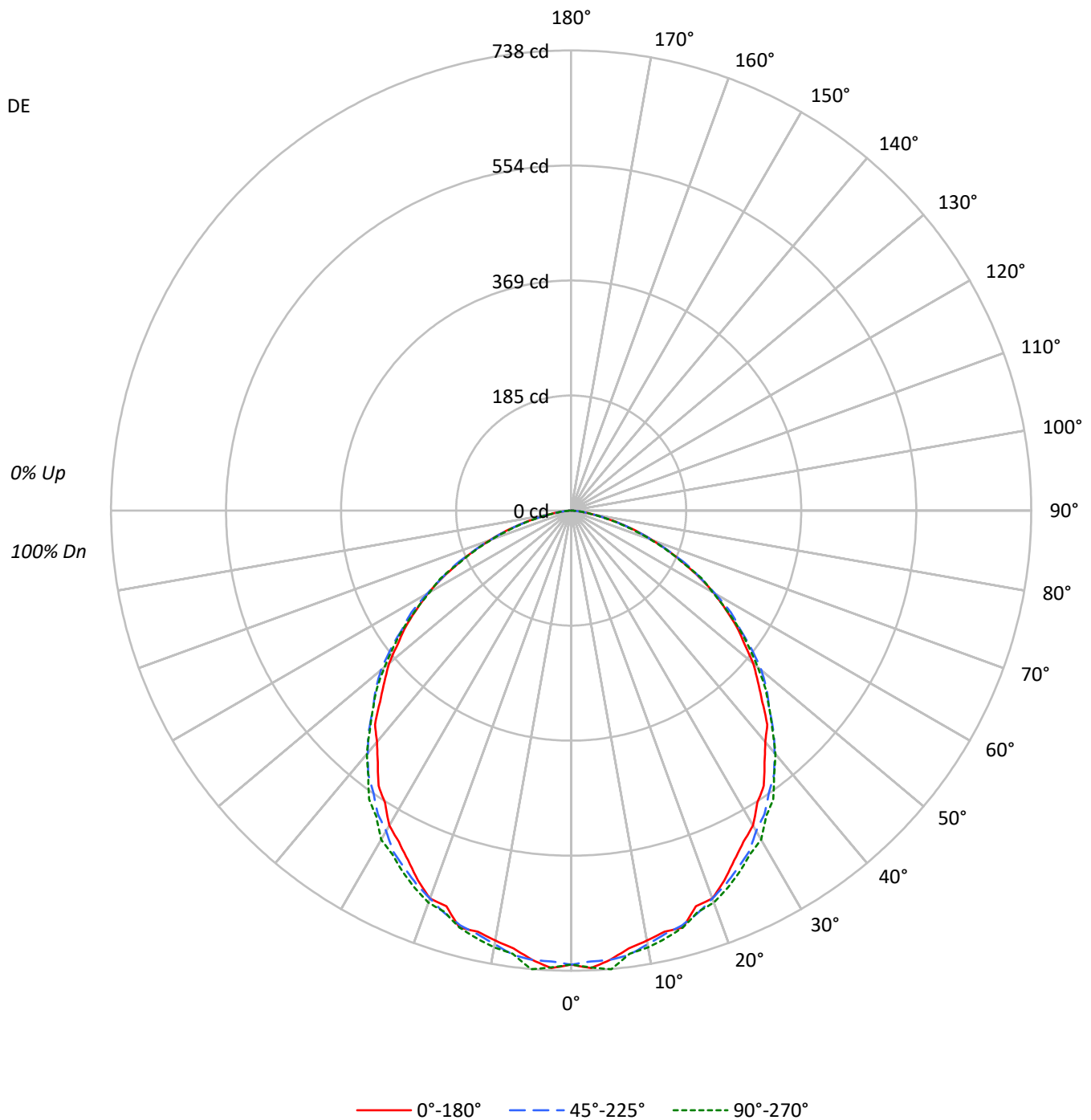
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1959	1959	1959
5°	1953	1954	1995
10°	1913	1930	1944
15°	1928	1918	1929
20°	1896	1896	1916
25°	1837	1878	1898
30°	1812	1844	1893
35°	1770	1816	1857
40°	1701	1782	1790
45°	1649	1708	1710
50°	1595	1667	1635
55°	1520	1549	1538
60°	1421	1435	1410
65°	1267	1300	1258
70°	1087	1091	1061
75°	861	859	826
80°	576	561	539
85°	315	312	290

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1752 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.5	3.7
10°-20°	194.1	10.6
20°-30°	290.8	15.8
30°-40°	344.7	18.8
40°-50°	345.3	18.8
50°-60°	293.1	16.0
60°-70°	197.6	10.8
70°-80°	86.8	4.7
80°-90°	14.1	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°	553.4	30.2
0°-40°	898.1	48.9
0°-60°	1536.5	83.7
0°-90°	1835.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1835.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	728	728	728	728	728	
5°	723	721	723	721	738	68
15°	692	684	688	692	692	193
25°	619	622	632	641	639	286
35°	539	540	553	566	565	334
45°	433	442	449	460	449	335
55°	324	322	330	328	328	288
65°	199	196	204	196	198	198
75°	83	81	83	77	79	89
85°	10	10	10	10	9	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	728.1	728.1	728.1	728.1	728.1
2.5°	734.4	728.8	723.7	729.7	733.3
5°	722.9	721.2	723.2	721.0	738.4
7.5°	708.1	714.5	718.3	716.0	717.0
10°	700.2	697.9	706.3	712.1	711.3
12.5°	691.7	695.1	695.6	701.9	702.4
15°	692.2	684.2	688.4	692.0	692.3
17.5°	665.3	673.9	676.8	685.0	674.9
20°	662.0	655.7	662.0	670.4	669.0
22.5°	641.8	634.7	648.3	655.7	655.2
25°	618.8	622.2	632.4	640.7	639.3
27.5°	598.7	602.7	617.2	628.5	621.2
30°	583.2	581.2	593.5	603.6	609.3
32.5°	555.5	562.6	576.9	587.0	581.6
35°	538.7	540.3	552.8	565.5	565.2
37.5°	509.2	516.7	534.2	537.8	534.5
40°	484.1	491.6	507.4	511.3	509.7
42.5°	465.6	466.9	480.6	485.0	477.9
45°	433.4	441.5	448.8	460.4	449.4
47.5°	405.9	409.7	425.5	428.6	422.8
50°	381.0	382.3	398.2	394.4	390.6
52.5°	349.7	355.3	364.2	363.4	359.0
55°	323.9	321.8	330.2	328.0	327.9
57.5°	293.0	296.8	303.7	300.2	294.4
60°	264.1	264.2	266.7	262.7	261.9
62.5°	231.8	232.9	233.5	228.5	236.6
65°	199.0	196.4	204.1	196.3	197.6
67.5°	168.8	170.2	169.4	164.5	166.4
70°	138.2	139.9	138.7	133.1	134.8
72.5°	110.2	108.1	109.4	102.5	105.7
75°	82.8	81.1	82.6	76.8	79.4
77.5°	56.4	57.7	56.8	53.7	55.5
80°	37.2	36.2	36.2	34.4	34.8
82.5°	21.7	20.7	20.4	19.8	20.7
85°	10.2	9.9	10.1	9.8	9.4
87.5°	3.7	3.8	3.8	3.6	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)