

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: P590068

Luminaire Tested: FSR-24-2-LD4-1STD-35-UNV-93-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590068
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-35-UNV-93-97-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1868.0 lumens
Efficiency: N/A
Efficacy: 112.5 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

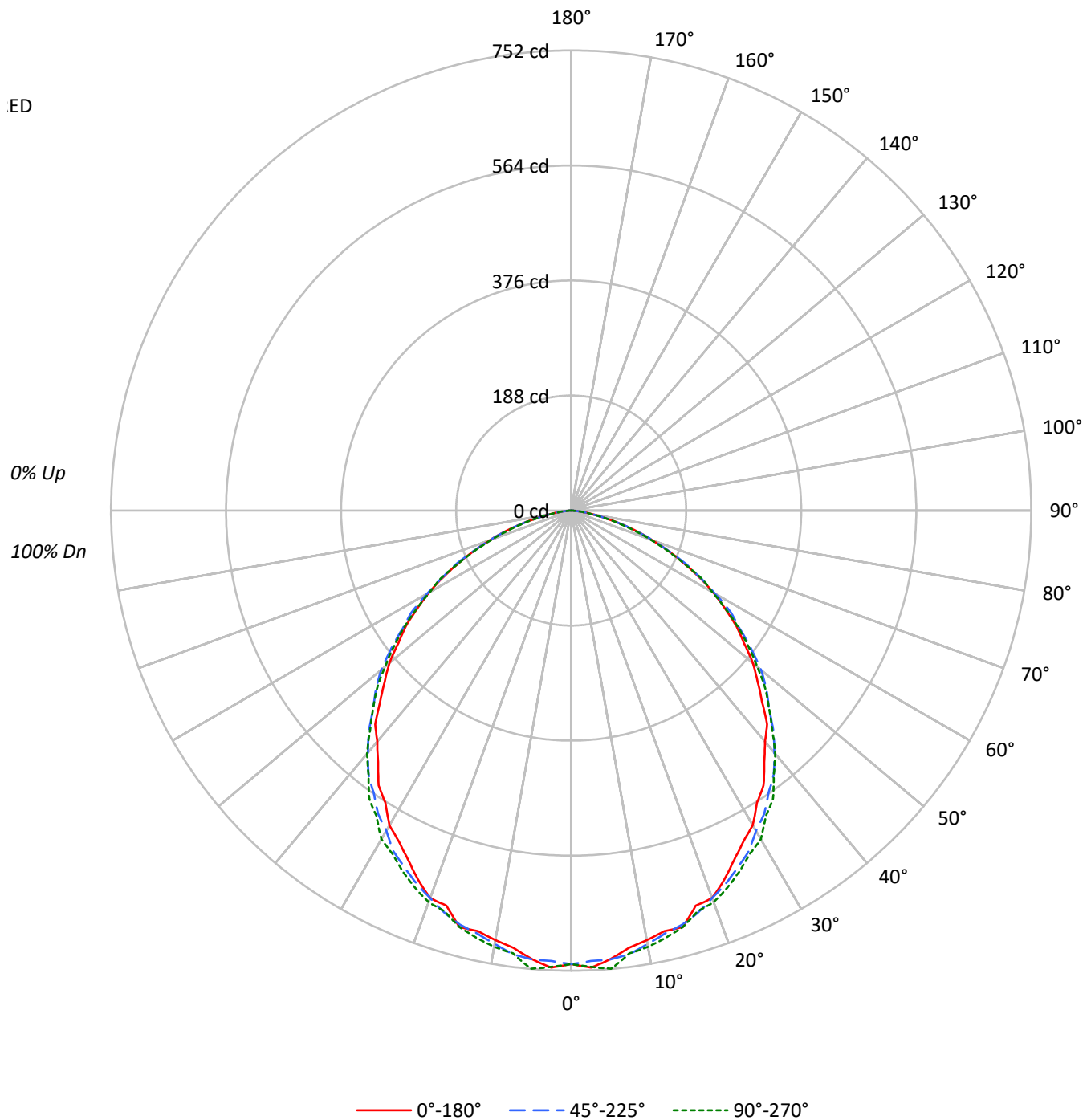
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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	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°	1995	1995	1995
5°	1988	1989	2031
10°	1948	1965	1978
15°	1963	1952	1963
20°	1930	1930	1950
25°	1871	1912	1932
30°	1845	1877	1927
35°	1801	1849	1890
40°	1731	1815	1823
45°	1679	1739	1741
50°	1624	1697	1665
55°	1547	1577	1566
60°	1447	1461	1435
65°	1290	1323	1281
70°	1107	1111	1079
75°	876	874	841
80°	587	570	549
85°	318	315	296

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1783 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.7	3.7
10°-20°	197.6	10.6
20°-30°	296.0	15.8
30°-40°	350.9	18.8
40°-50°	351.5	18.8
50°-60°	298.4	16.0
60°-70°	201.2	10.8
70°-80°	88.4	4.7
80°-90°	14.4	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°	563.3	30.2
0°-40°	914.2	48.9
0°-60°	1564.1	83.7
0°-90°	1868.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1868.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	741	741	741	741	741	
5°	736	734	736	734	752	69
15°	705	696	701	704	705	196
25°	630	633	644	652	651	291
35°	548	550	563	576	575	340
45°	441	449	457	469	458	341
55°	330	328	336	334	334	293
65°	203	200	208	200	201	201
75°	84	83	84	78	81	90
85°	10	10	10	10	10	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	741.2	741.2	741.2	741.2	741.2
2.5°	747.6	741.9	736.7	742.8	746.5
5°	735.9	734.2	736.2	734.0	751.7
7.5°	720.8	727.4	731.2	728.8	729.9
10°	712.8	710.5	719.0	724.9	724.0
12.5°	704.1	707.6	708.1	714.5	715.0
15°	704.6	696.5	700.8	704.4	704.7
17.5°	677.2	686.1	689.0	697.3	687.0
20°	673.9	667.5	673.9	682.4	681.1
22.5°	653.3	646.1	659.9	667.5	667.0
25°	630.0	633.4	643.8	652.2	650.8
27.5°	609.5	613.5	628.3	639.8	632.4
30°	593.7	591.7	604.1	614.5	620.2
32.5°	565.5	572.7	587.3	597.5	592.1
35°	548.3	550.0	562.7	575.7	575.3
37.5°	518.4	526.0	543.8	547.5	544.1
40°	492.8	500.4	516.6	520.5	518.9
42.5°	474.0	475.3	489.2	493.7	486.5
45°	441.2	449.4	456.9	468.6	457.5
47.5°	413.2	417.0	433.1	436.3	430.4
50°	387.9	389.2	405.4	401.4	397.6
52.5°	356.0	361.6	370.7	370.0	365.5
55°	329.8	327.6	336.2	333.9	333.8
57.5°	298.3	302.1	309.2	305.6	299.7
60°	268.8	268.9	271.5	267.4	266.6
62.5°	236.0	237.1	237.7	232.6	240.9
65°	202.6	199.9	207.8	199.8	201.2
67.5°	171.9	173.2	172.4	167.5	169.4
70°	140.7	142.4	141.2	135.5	137.2
72.5°	112.2	110.1	111.4	104.3	107.6
75°	84.3	82.6	84.1	78.2	80.9
77.5°	57.4	58.8	57.8	54.6	56.5
80°	37.9	36.8	36.8	35.0	35.4
82.5°	22.1	21.1	20.8	20.2	21.1
85°	10.3	10.0	10.2	10.0	9.6
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)