

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: P590117

Luminaire Tested: FSR-24-2-LD4-1STD-50-UNV-82-84-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590117
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-50-UNV-82-84-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1864.0 lumens
Efficiency: N/A
Efficacy: 112.3 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

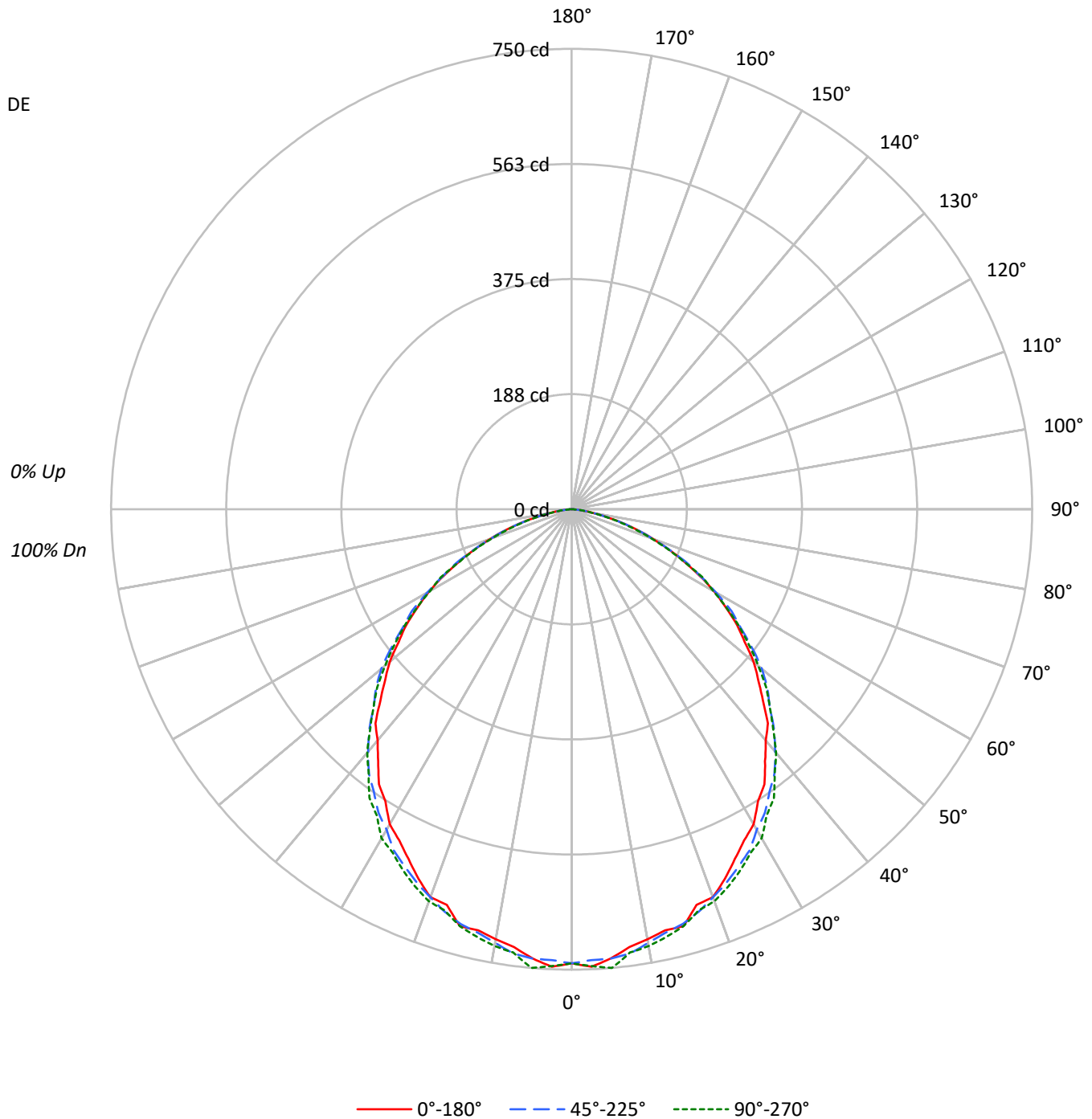
Input Watts (W): 16.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	1990	1990	1990
5°	1984	1984	2026
10°	1943	1960	1974
15°	1959	1948	1959
20°	1926	1926	1946
25°	1866	1907	1928
30°	1841	1873	1923
35°	1798	1845	1886
40°	1728	1811	1819
45°	1675	1735	1737
50°	1620	1693	1661
55°	1544	1574	1563
60°	1443	1458	1432
65°	1287	1320	1278
70°	1105	1109	1077
75°	874	872	839
80°	586	570	547
85°	318	315	293

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1780 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.6	3.7
10°-20°	197.2	10.6
20°-30°	295.4	15.8
30°-40°	350.1	18.8
40°-50°	350.8	18.8
50°-60°	297.7	16.0
60°-70°	200.7	10.8
70°-80°	88.2	4.7
80°-90°	14.3	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°	562.1	30.2
0°-40°	912.3	48.9
0°-60°	1560.7	83.7
0°-90°	1864.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1864.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	740	740	740	740	740	
5°	734	733	735	732	750	69
15°	703	695	699	703	703	196
25°	629	632	642	651	649	291
35°	547	549	562	574	574	340
45°	440	448	456	468	456	341
55°	329	327	336	333	333	293
65°	202	200	207	199	201	201
75°	84	82	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°	739.6	739.6	739.6	739.6	739.6
2.5°	746.0	740.4	735.1	741.2	744.9
5°	734.3	732.6	734.6	732.4	750.1
7.5°	719.2	725.8	729.7	727.3	728.3
10°	711.2	708.9	717.4	723.4	722.5
12.5°	702.6	706.1	706.5	712.9	713.5
15°	703.1	695.0	699.3	702.9	703.2
17.5°	675.8	684.6	687.5	695.9	685.5
20°	672.5	666.1	672.5	681.0	679.6
22.5°	651.9	644.8	658.5	666.1	665.6
25°	628.6	632.1	642.4	650.8	649.4
27.5°	608.2	612.2	626.9	638.5	631.0
30°	592.4	590.4	602.8	613.2	618.9
32.5°	564.3	571.5	586.0	596.3	590.8
35°	547.2	548.8	561.5	574.5	574.1
37.5°	517.3	524.8	542.7	546.3	543.0
40°	491.8	499.3	515.5	519.4	517.8
42.5°	473.0	474.3	488.2	492.6	485.5
45°	440.2	448.4	455.9	467.6	456.5
47.5°	412.3	416.2	432.2	435.3	429.5
50°	387.0	388.4	404.5	400.6	396.8
52.5°	355.2	360.9	369.9	369.2	364.7
55°	329.1	326.9	335.5	333.2	333.1
57.5°	297.6	301.5	308.5	304.9	299.1
60°	268.2	268.3	270.9	266.8	266.0
62.5°	235.5	236.6	237.2	232.1	240.4
65°	202.2	199.5	207.3	199.4	200.7
67.5°	171.5	172.8	172.1	167.1	169.0
70°	140.4	142.1	140.9	135.2	136.9
72.5°	111.9	109.8	111.2	104.1	107.3
75°	84.1	82.4	83.9	78.0	80.7
77.5°	57.3	58.6	57.7	54.5	56.3
80°	37.8	36.8	36.8	35.0	35.3
82.5°	22.1	21.0	20.7	20.1	21.0
85°	10.3	10.0	10.2	9.9	9.5
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)