

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: P589889

Luminaire Tested: FSR-24-2-LD4-1HI-40-UNV-81-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589889
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-LD4-1HI-40-UNV-81-88-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .500 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1939.0 lumens
Efficiency: N/A
Efficacy: 89.8 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

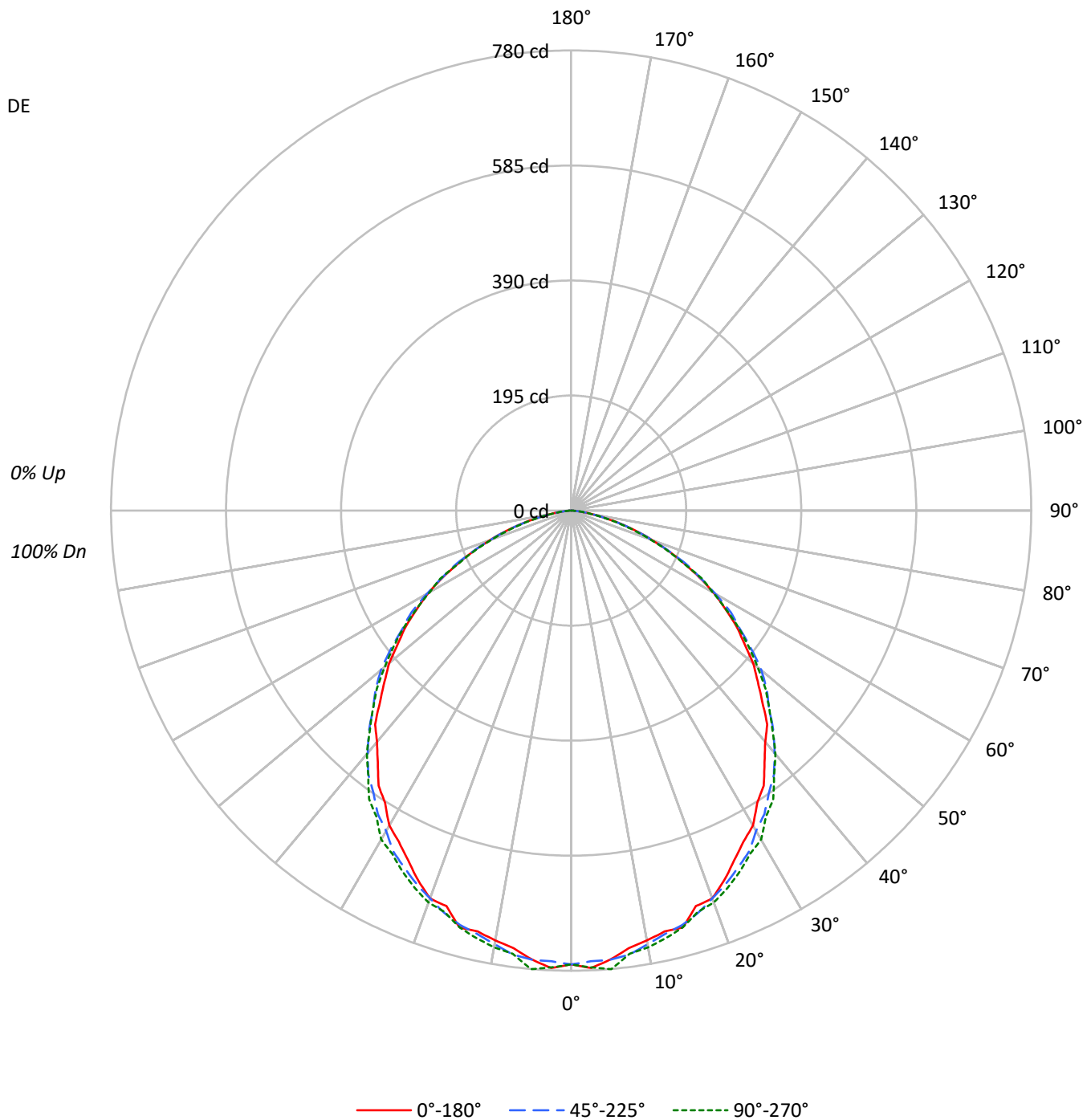
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2070	2070	2070
5°	2063	2064	2108
10°	2021	2039	2054
15°	2038	2026	2038
20°	2003	2003	2025
25°	1942	1984	2006
30°	1915	1949	2000
35°	1870	1919	1962
40°	1797	1884	1892
45°	1743	1805	1807
50°	1685	1762	1728
55°	1606	1637	1626
60°	1502	1517	1489
65°	1339	1373	1330
70°	1149	1153	1120
75°	910	908	872
80°	609	592	570
85°	330	327	306

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1851 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.4	3.7
10°-20°	205.1	10.6
20°-30°	307.3	15.8
30°-40°	364.2	18.8
40°-50°	364.9	18.8
50°-60°	309.7	16.0
60°-70°	208.8	10.8
70°-80°	91.7	4.7
80°-90°	14.9	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°	584.8	30.2
0°-40°	949.0	48.9
0°-60°	1623.5	83.7
0°-90°	1939.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1939.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	769	769	769	769	769	
5°	764	762	764	762	780	72
15°	731	723	727	731	732	204
25°	654	658	668	677	676	302
35°	569	571	584	598	597	353
45°	458	466	474	486	475	354
55°	342	340	349	347	346	304
65°	210	208	216	207	209	209
75°	88	86	87	81	84	94
85°	11	10	11	10	10	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	769.3	769.3	769.3	769.3	769.3
2.5°	776.0	770.1	764.7	771.0	774.9
5°	763.9	762.1	764.2	761.9	780.3
7.5°	748.2	755.0	759.0	756.5	757.6
10°	739.8	737.5	746.3	752.5	751.6
12.5°	730.9	734.5	735.0	741.6	742.2
15°	731.4	723.0	727.4	731.2	731.5
17.5°	703.0	712.1	715.2	723.9	713.1
20°	699.5	692.9	699.5	708.4	707.0
22.5°	678.2	670.7	685.0	692.9	692.4
25°	653.9	657.5	668.2	677.0	675.6
27.5°	632.7	636.8	652.1	664.2	656.4
30°	616.3	614.2	627.1	637.8	643.8
32.5°	587.0	594.5	609.6	620.2	614.6
35°	569.2	570.9	584.1	597.6	597.2
37.5°	538.1	545.9	564.5	568.3	564.8
40°	511.6	519.4	536.2	540.3	538.6
42.5°	492.0	493.4	507.8	512.5	505.0
45°	457.9	466.5	474.2	486.4	474.9
47.5°	428.9	432.9	449.6	452.9	446.8
50°	402.6	404.0	420.8	416.7	412.7
52.5°	369.5	375.4	384.8	384.0	379.4
55°	342.3	340.0	349.0	346.6	346.5
57.5°	309.6	313.6	320.9	317.2	311.1
60°	279.0	279.1	281.8	277.5	276.7
62.5°	245.0	246.2	246.7	241.5	250.0
65°	210.3	207.5	215.7	207.4	208.8
67.5°	178.4	179.8	179.0	173.8	175.8
70°	146.0	147.8	146.5	140.7	142.4
72.5°	116.4	114.2	115.6	108.3	111.7
75°	87.5	85.7	87.3	81.2	83.9
77.5°	59.6	61.0	60.0	56.7	58.6
80°	39.3	38.2	38.2	36.4	36.8
82.5°	22.9	21.9	21.6	21.0	21.9
85°	10.7	10.4	10.6	10.3	9.9
87.5°	3.9	4.0	4.0	3.8	3.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)