

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: P589857

Luminaire Tested: FSR-24-2-LD4-1HI-35-UNV-81-88-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589857
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-35-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 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1920.0 lumens
Efficiency: N/A
Efficacy: 88.9 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

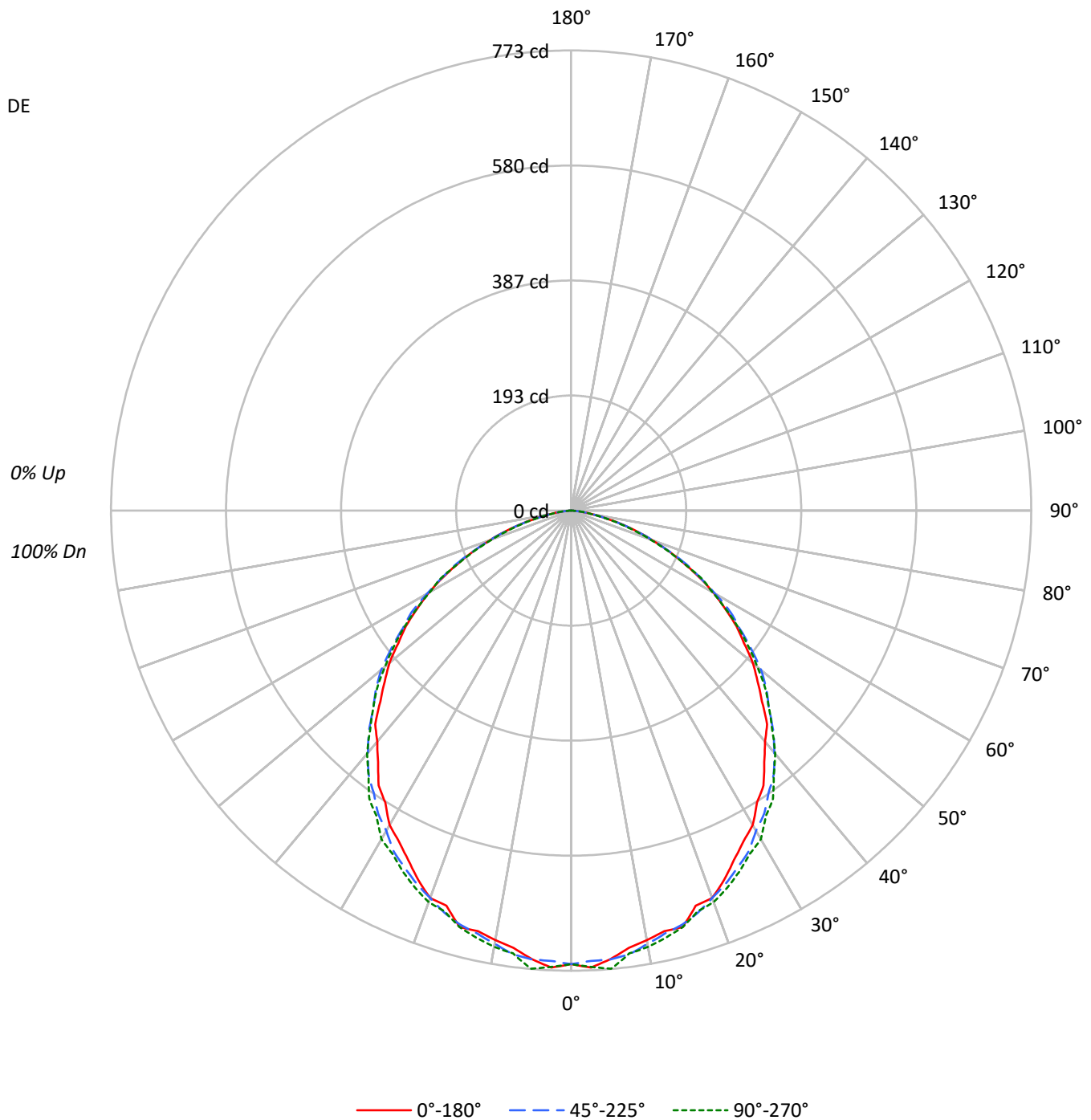
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2050	2050	2050
5°	2043	2044	2087
10°	2002	2019	2034
15°	2018	2007	2018
20°	1984	1984	2005
25°	1923	1965	1986
30°	1896	1930	1981
35°	1851	1900	1942
40°	1780	1865	1873
45°	1725	1787	1790
50°	1669	1744	1711
55°	1590	1621	1610
60°	1487	1502	1475
65°	1326	1359	1317
70°	1138	1142	1109
75°	901	899	864
80°	604	587	564
85°	327	324	303

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 1833 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.7	3.7
10°-20°	203.1	10.6
20°-30°	304.3	15.8
30°-40°	360.6	18.8
40°-50°	361.3	18.8
50°-60°	306.7	16.0
60°-70°	206.8	10.8
70°-80°	90.9	4.7
80°-90°	14.7	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°	579.0	30.2
0°-40°	939.7	48.9
0°-60°	1607.6	83.7
0°-90°	1920.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1920.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	762	762	762	762	762	
5°	756	755	757	754	773	71
15°	724	716	720	724	724	202
25°	648	651	662	670	669	299
35°	564	565	578	592	591	350
45°	453	462	470	482	470	351
55°	339	337	346	343	343	302
65°	208	206	214	205	207	207
75°	87	85	86	80	83	93
85°	11	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°	761.8	761.8	761.8	761.8	761.8
2.5°	768.4	762.6	757.2	763.5	767.3
5°	756.4	754.6	756.7	754.4	772.6
7.5°	740.9	747.6	751.6	749.1	750.2
10°	732.6	730.2	739.0	745.1	744.2
12.5°	723.7	727.3	727.8	734.4	735.0
15°	724.2	715.9	720.3	724.0	724.3
17.5°	696.1	705.2	708.2	716.8	706.1
20°	692.7	686.1	692.7	701.4	700.0
22.5°	671.5	664.1	678.3	686.1	685.6
25°	647.5	651.1	661.7	670.3	669.0
27.5°	626.5	630.6	645.7	657.6	650.0
30°	610.2	608.2	621.0	631.6	637.5
32.5°	581.2	588.7	603.6	614.2	608.6
35°	563.6	565.3	578.4	591.7	591.3
37.5°	532.8	540.6	559.0	562.7	559.3
40°	506.6	514.3	531.0	535.0	533.3
42.5°	487.2	488.6	502.8	507.4	500.1
45°	453.4	461.9	469.6	481.7	470.3
47.5°	424.7	428.7	445.2	448.4	442.4
50°	398.7	400.0	416.7	412.6	408.7
52.5°	365.9	371.7	381.1	380.3	375.6
55°	339.0	336.7	345.5	343.2	343.1
57.5°	306.6	310.5	317.8	314.1	308.1
60°	276.3	276.4	279.1	274.8	274.0
62.5°	242.6	243.7	244.3	239.1	247.6
65°	208.2	205.5	213.5	205.4	206.8
67.5°	176.7	178.0	177.2	172.1	174.1
70°	144.6	146.4	145.1	139.3	141.0
72.5°	115.3	113.1	114.5	107.2	110.6
75°	86.7	84.9	86.5	80.4	83.1
77.5°	59.0	60.4	59.4	56.2	58.0
80°	39.0	37.9	37.9	36.0	36.4
82.5°	22.7	21.6	21.3	20.8	21.6
85°	10.6	10.3	10.5	10.2	9.8
87.5°	3.8	3.9	3.9	3.7	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)