

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: P589888

Luminaire Tested: FSR-24-2-LD4-1HI-40-UNV-81-87-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P589888
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-81-87-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2153.0 lumens
Efficiency: N/A
Efficacy: 99.7 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

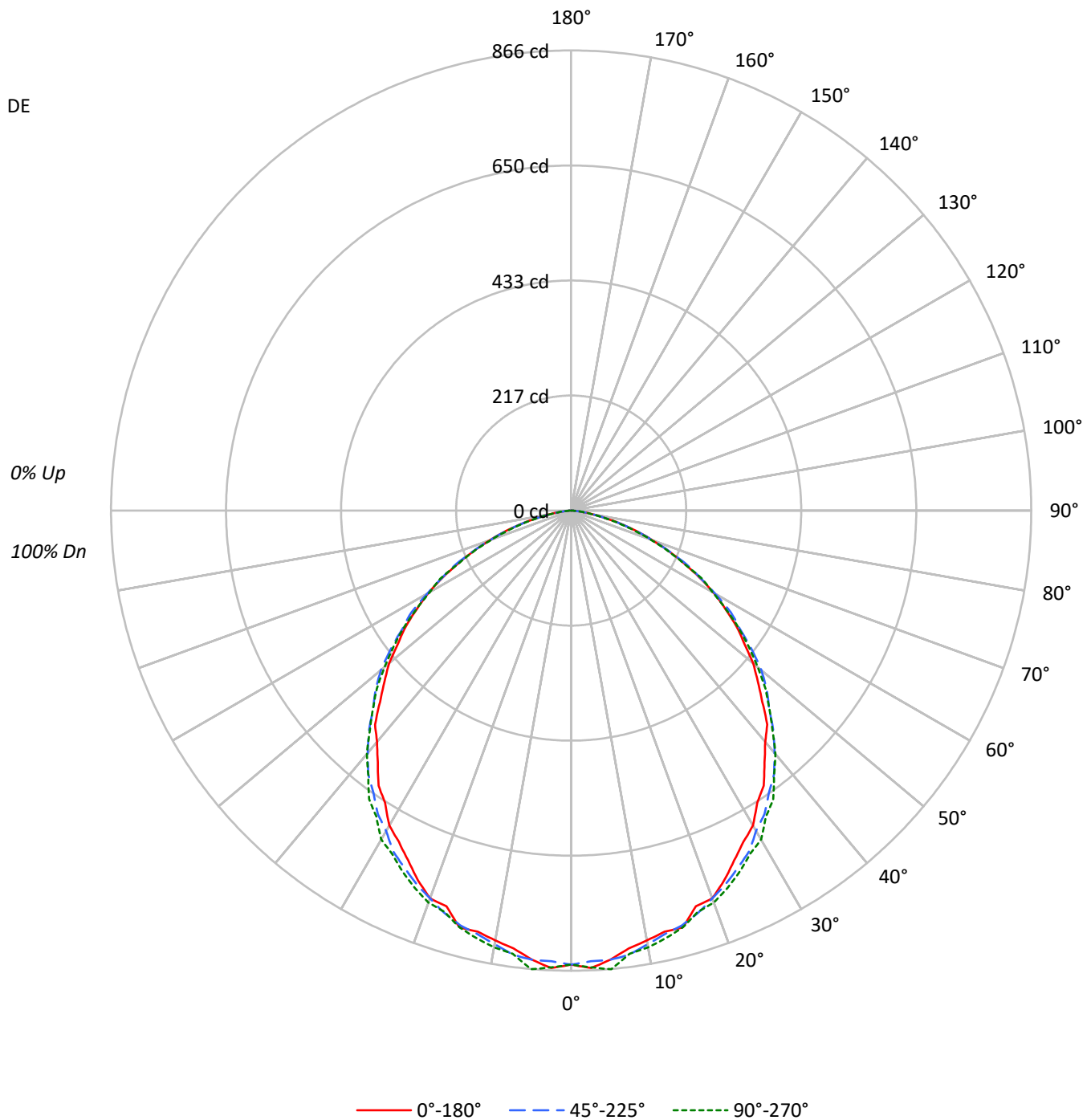
Input Watts (W): 21.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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					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°	2299	2299	2299
5°	2291	2292	2340
10°	2245	2264	2280
15°	2262	2250	2263
20°	2224	2224	2248
25°	2156	2203	2227
30°	2126	2164	2221
35°	2076	2131	2178
40°	1995	2092	2101
45°	1935	2004	2007
50°	1871	1956	1919
55°	1783	1818	1805
60°	1667	1684	1654
65°	1487	1525	1476
70°	1275	1280	1245
75°	1011	1009	969
80°	677	659	632
85°	367	364	340

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 2055 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.4	3.7
10°-20°	227.7	10.6
20°-30°	341.2	15.8
30°-40°	404.4	18.8
40°-50°	405.1	18.8
50°-60°	343.9	16.0
60°-70°	231.8	10.8
70°-80°	101.9	4.7
80°-90°	16.6	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°	649.3	30.2
0°-40°	1053.7	48.9
0°-60°	1802.7	83.7
0°-90°	2153.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2153.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	854	854	854	854	854	
5°	848	846	848	846	866	80
15°	812	803	808	812	812	226
25°	726	730	742	752	750	336
35°	632	634	649	664	663	392
45°	508	518	527	540	527	393
55°	380	378	388	385	385	338
65°	234	230	240	230	232	232
75°	97	95	97	90	93	104
85°	12	12	12	12	11	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	854.3	854.3	854.3	854.3	854.3
2.5°	861.6	855.1	849.1	856.1	860.4
5°	848.2	846.2	848.5	846.0	866.4
7.5°	830.8	838.4	842.8	840.0	841.2
10°	821.5	818.9	828.7	835.5	834.5
12.5°	811.6	815.5	816.1	823.5	824.1
15°	812.1	802.7	807.7	811.9	812.2
17.5°	780.6	790.7	794.1	803.7	791.8
20°	776.7	769.3	776.7	786.5	785.0
22.5°	753.0	744.7	760.6	769.3	768.8
25°	726.1	730.1	742.0	751.7	750.1
27.5°	702.5	707.1	724.1	737.5	728.8
30°	684.3	682.0	696.3	708.2	714.8
32.5°	651.7	660.1	676.9	688.7	682.4
35°	632.0	633.9	648.6	663.6	663.1
37.5°	597.5	606.2	626.8	631.0	627.2
40°	568.0	576.7	595.4	599.9	598.0
42.5°	546.3	547.8	563.8	569.0	560.8
45°	508.5	518.0	526.6	540.1	527.3
47.5°	476.3	480.7	499.2	502.8	496.1
50°	447.0	448.6	467.2	462.7	458.3
52.5°	410.3	416.8	427.3	426.4	421.2
55°	380.1	377.5	387.5	384.8	384.7
57.5°	343.8	348.2	356.4	352.2	345.5
60°	309.8	309.9	312.9	308.2	307.3
62.5°	272.0	273.3	274.0	268.1	277.6
65°	233.5	230.4	239.5	230.3	231.8
67.5°	198.1	199.6	198.8	193.0	195.2
70°	162.1	164.1	162.7	156.2	158.2
72.5°	129.3	126.8	128.4	120.2	124.0
75°	97.2	95.2	97.0	90.1	93.2
77.5°	66.2	67.7	66.6	63.0	65.1
80°	43.7	42.5	42.5	40.4	40.8
82.5°	25.5	24.3	23.9	23.3	24.3
85°	11.9	11.6	11.8	11.5	11.0
87.5°	4.3	4.4	4.4	4.2	4.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)