

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: P590692

Luminaire Tested: FSR-24-2-LD4-3STD-50-UNV-81-97-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590692
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-LD4-3STD-50-UNV-81-97-EDD
Description: 2X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .375 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5459.0 lumens
Efficiency: N/A
Efficacy: 109.2 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

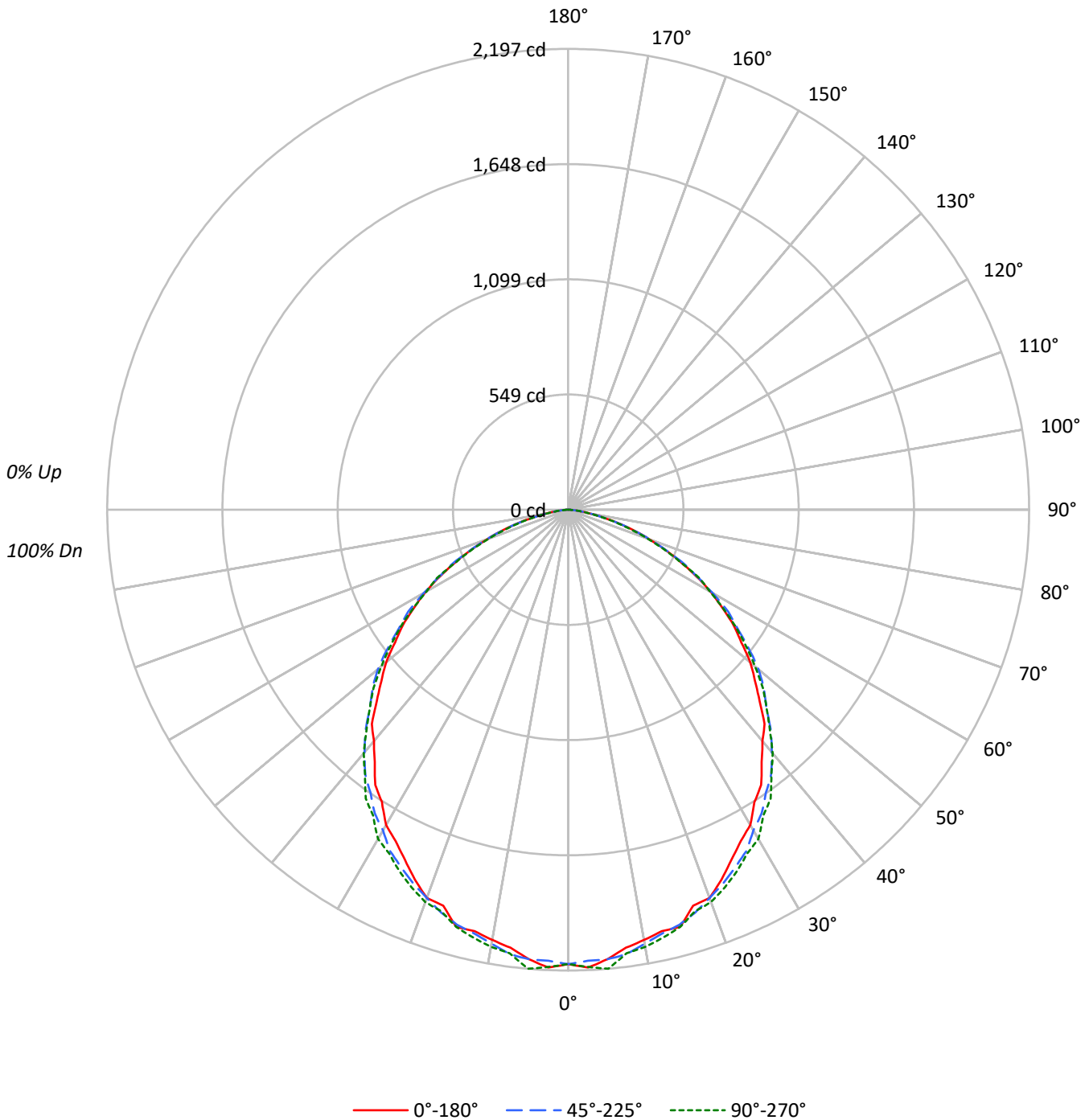
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	5829	5829	5829
5°	5809	5812	5934
10°	5692	5741	5782
15°	5737	5706	5737
20°	5640	5640	5700
25°	5466	5586	5647
30°	5391	5486	5632
35°	5264	5402	5523
40°	5060	5303	5326
45°	4906	5081	5088
50°	4745	4960	4865
55°	4521	4609	4577
60°	4228	4270	4193
65°	3769	3866	3743
70°	3234	3246	3155
75°	2562	2556	2457
80°	1715	1669	1604
85°	932	923	865

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5212 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.7	3.7
10°-20°	577.4	10.6
20°-30°	865.1	15.8
30°-40°	1025.3	18.8
40°-50°	1027.2	18.8
50°-60°	872.0	16.0
60°-70°	587.9	10.8
70°-80°	258.3	4.7
80°-90°	42.0	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°	1646.3	30.2
0°-40°	2671.6	48.9
0°-60°	4570.8	83.7
0°-90°	5459.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5459.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2166	2166	2166	2166	2166	
5°	2151	2146	2152	2145	2197	203
15°	2059	2035	2048	2059	2059	574
25°	1841	1851	1881	1906	1902	851
35°	1602	1607	1644	1682	1681	995
45°	1289	1313	1335	1370	1337	997
55°	964	957	982	976	976	857
65°	592	584	607	584	588	589
75°	246	241	246	228	236	264
85°	30	29	30	29	28	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2166.0	2166.0	2166.0	2166.0	2166.0
2.5°	2184.7	2168.2	2152.8	2170.7	2181.7
5°	2150.6	2145.6	2151.5	2145.0	2196.8
7.5°	2106.4	2125.7	2136.9	2129.9	2133.0
10°	2082.9	2076.2	2101.1	2118.5	2115.9
12.5°	2057.8	2067.8	2069.2	2088.0	2089.6
15°	2059.2	2035.4	2048.0	2058.6	2059.4
17.5°	1979.2	2004.9	2013.6	2037.9	2007.7
20°	1969.4	1950.7	1969.4	1994.3	1990.4
22.5°	1909.3	1888.3	1928.6	1950.7	1949.3
25°	1841.0	1851.1	1881.3	1905.9	1902.0
27.5°	1781.2	1792.9	1836.0	1869.8	1848.0
30°	1735.0	1729.2	1765.5	1795.7	1812.5
32.5°	1652.5	1673.8	1716.3	1746.2	1730.3
35°	1602.5	1607.2	1644.4	1682.5	1681.3
37.5°	1514.9	1537.0	1589.3	1600.0	1590.2
40°	1440.3	1462.4	1509.6	1521.1	1516.3
42.5°	1385.2	1389.1	1429.6	1442.8	1421.8
45°	1289.2	1313.3	1335.1	1369.5	1337.1
47.5°	1207.6	1218.8	1265.8	1275.0	1257.9
50°	1133.5	1137.4	1184.7	1173.2	1162.0
52.5°	1040.3	1056.8	1083.4	1081.2	1068.0
55°	963.7	957.3	982.5	975.7	975.5
57.5°	871.7	882.9	903.6	893.0	875.9
60°	785.6	785.9	793.4	781.4	779.1
62.5°	689.7	693.0	694.7	679.9	703.9
65°	592.0	584.2	607.1	583.9	587.9
67.5°	502.3	506.2	504.0	489.4	495.0
70°	411.1	416.1	412.5	396.0	401.0
72.5°	327.8	321.6	325.5	304.8	314.3
75°	246.4	241.3	245.8	228.5	236.3
77.5°	167.8	171.7	168.9	159.7	165.0
80°	110.7	107.7	107.7	102.4	103.5
82.5°	64.6	61.5	60.7	59.0	61.5
85°	30.2	29.4	29.9	29.1	28.0
87.5°	10.9	11.2	11.2	10.6	10.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)