

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: P590634

Luminaire Tested: FSR-24-2-LD4-3STD-35-UNV-82-94-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590634
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-35-UNV-82-94-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5456.0 lumens
Efficiency: N/A
Efficacy: 109.1 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

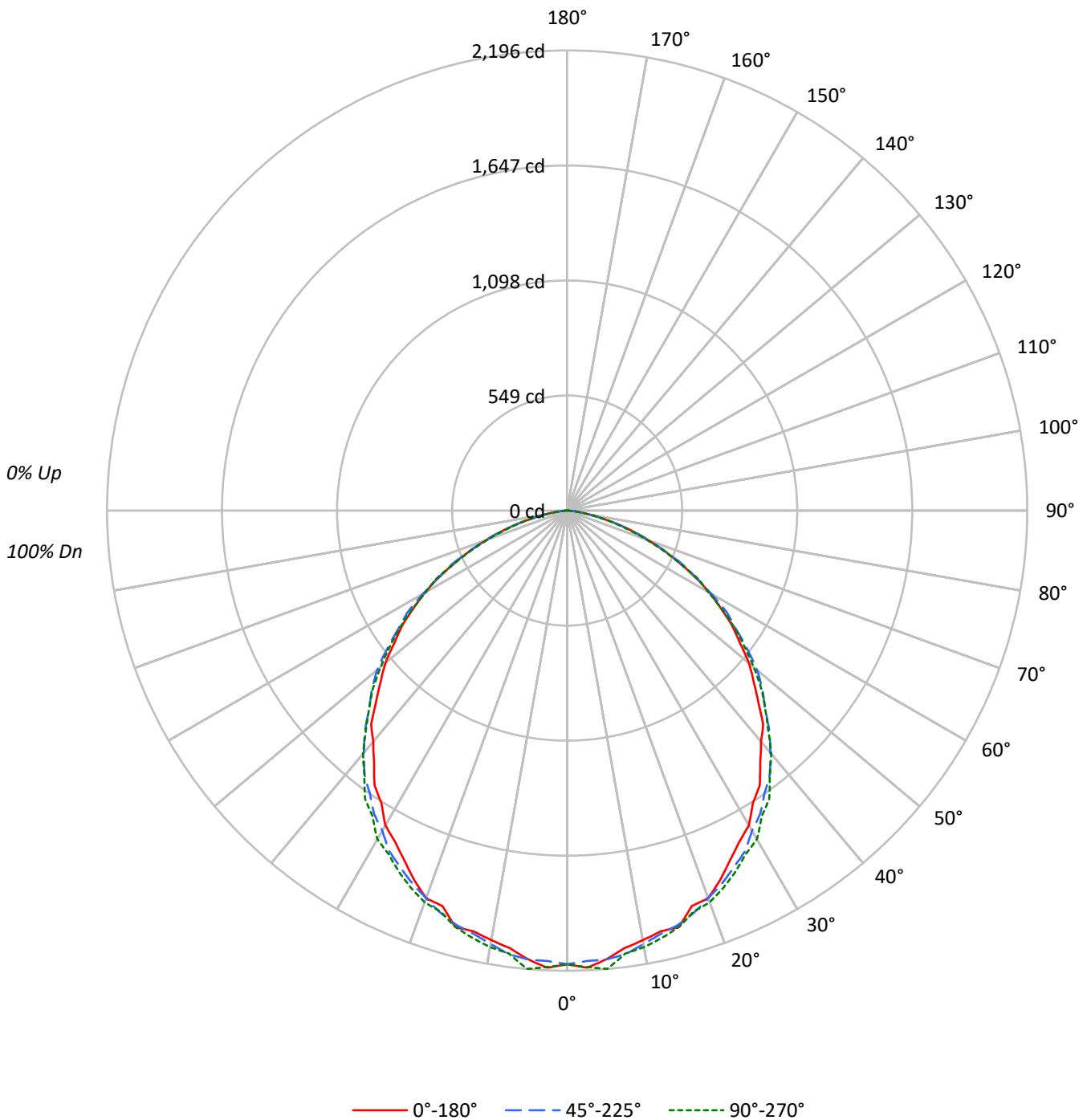
Input Watts (W): 50
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	5825	5825	5825
5°	5806	5809	5931
10°	5689	5738	5779
15°	5733	5702	5734
20°	5637	5637	5697
25°	5463	5583	5644
30°	5388	5483	5629
35°	5261	5399	5520
40°	5057	5300	5324
45°	4904	5078	5085
50°	4743	4957	4862
55°	4519	4607	4574
60°	4225	4268	4191
65°	3768	3864	3741
70°	3233	3244	3153
75°	2560	2555	2456
80°	1715	1667	1602
85°	932	923	865

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 5209 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.6	3.7
10°-20°	577.1	10.6
20°-30°	864.6	15.8
30°-40°	1024.8	18.8
40°-50°	1026.7	18.8
50°-60°	871.5	16.0
60°-70°	587.5	10.8
70°-80°	258.2	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°	1645.4	30.2
0°-40°	2670.2	48.9
0°-60°	4568.3	83.7
0°-90°	5456.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5456.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2165	2165	2165	2165	2165	
5°	2149	2144	2150	2144	2196	203
15°	2058	2034	2047	2058	2058	573
25°	1840	1850	1880	1905	1901	851
35°	1602	1606	1644	1682	1680	994
45°	1288	1313	1334	1369	1336	997
55°	963	957	982	975	975	857
65°	592	584	607	584	588	588
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°	2164.8	2164.8	2164.8	2164.8	2164.8
2.5°	2183.5	2167.0	2151.7	2169.6	2180.5
5°	2149.4	2144.4	2150.3	2143.8	2195.5
7.5°	2105.3	2124.6	2135.7	2128.7	2131.8
10°	2081.8	2075.1	2100.0	2117.3	2114.8
12.5°	2056.6	2066.7	2068.1	2086.8	2088.5
15°	2058.0	2034.3	2046.8	2057.5	2058.3
17.5°	1978.1	2003.8	2012.5	2036.8	2006.6
20°	1968.3	1949.6	1968.3	1993.2	1989.3
22.5°	1908.2	1887.2	1927.5	1949.6	1948.2
25°	1840.0	1850.1	1880.3	1904.9	1900.9
27.5°	1780.2	1791.9	1835.0	1868.8	1847.0
30°	1734.1	1728.2	1764.5	1794.7	1811.5
32.5°	1651.6	1672.9	1715.4	1745.3	1729.3
35°	1601.6	1606.3	1643.5	1681.5	1680.4
37.5°	1514.1	1536.2	1588.5	1599.1	1589.3
40°	1439.5	1461.6	1508.8	1520.3	1515.5
42.5°	1384.4	1388.3	1428.9	1442.0	1421.0
45°	1288.5	1312.6	1334.4	1368.8	1336.3
47.5°	1206.9	1218.1	1265.1	1274.3	1257.2
50°	1132.9	1136.8	1184.0	1172.5	1161.4
52.5°	1039.8	1056.3	1082.8	1080.6	1067.4
55°	963.2	956.8	981.9	975.2	974.9
57.5°	871.2	882.4	903.1	892.5	875.4
60°	785.1	785.4	793.0	781.0	778.7
62.5°	689.3	692.6	694.3	679.5	703.5
65°	591.7	583.9	606.8	583.6	587.5
67.5°	502.0	505.9	503.7	489.1	494.7
70°	410.9	415.9	412.3	395.8	400.8
72.5°	327.6	321.4	325.3	304.7	314.2
75°	246.2	241.2	245.7	228.4	236.2
77.5°	167.7	171.6	168.8	159.6	164.9
80°	110.7	107.6	107.6	102.3	103.4
82.5°	64.6	61.5	60.7	59.0	61.5
85°	30.2	29.3	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)