

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: P562125

Luminaire Tested: FSR-24-4-LD4-1HI-50-UNV-81-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562125
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/20/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-4-LD4-1HI-50-UNV-81-96-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .250 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: 4630.0 lumens
Efficiency: N/A
Efficacy: 107.2 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

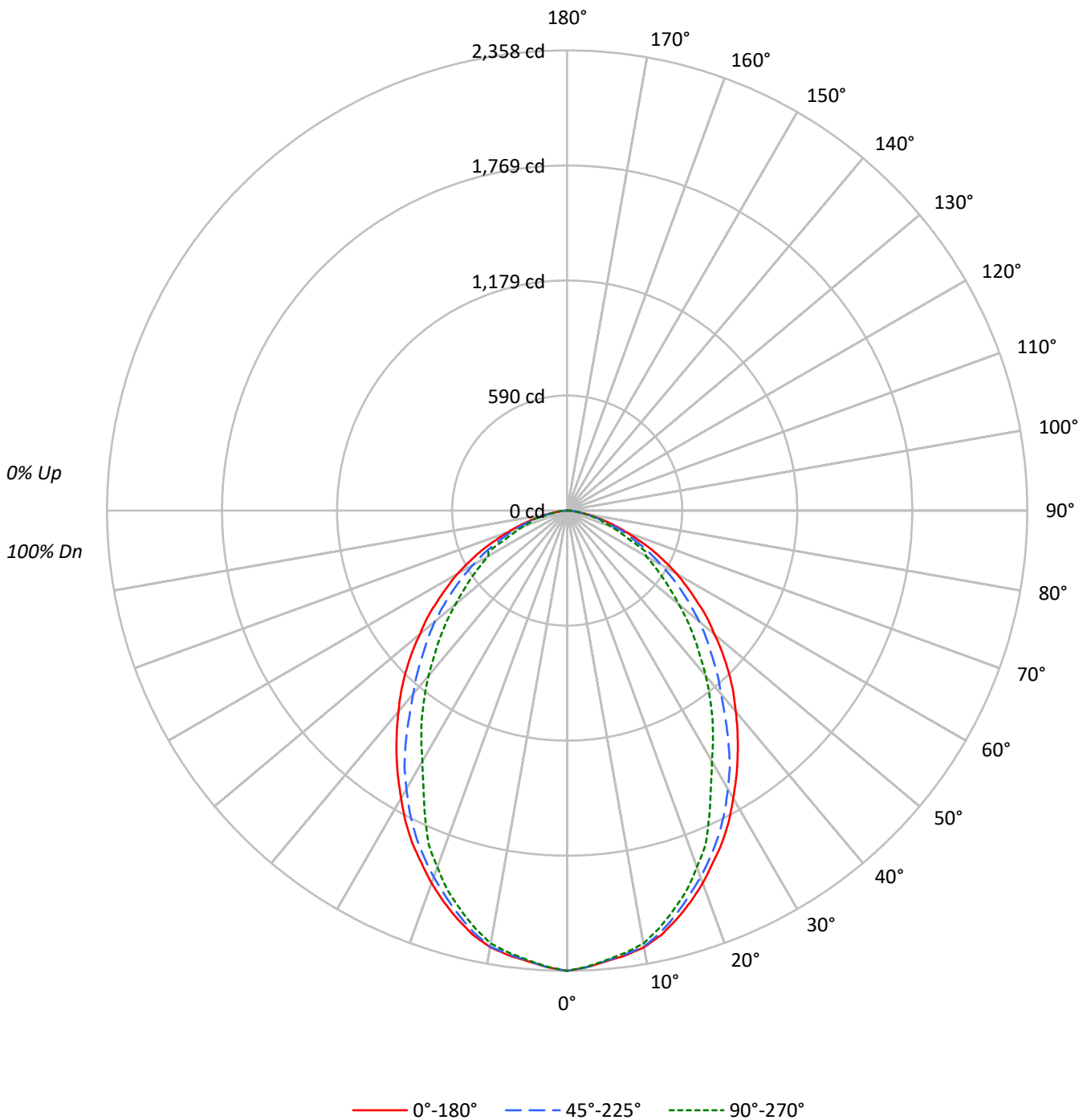
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3173	3173	3173
5°	3130	3126	3123
10°	3103	3099	3077
15°	3019	2989	2947
20°	2908	2862	2783
25°	2789	2728	2558
30°	2643	2559	2304
35°	2503	2365	2132
40°	2361	2155	1940
45°	2226	1992	1754
50°	2060	1849	1564
55°	1906	1676	1401
60°	1746	1497	1255
65°	1536	1311	1111
70°	1266	1148	944
75°	1006	879	921
80°	676	634	591
85°	421	505	590

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2226 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	219.5	4.7
10°-20°	602.5	13.0
20°-30°	834.1	18.0
30°-40°	889.4	19.2
40°-50°	811.4	17.5
50°-60°	635.7	13.7
60°-70°	414.3	8.9
70°-80°	183.6	4.0
80°-90°	39.4	0.9
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°	1656.2	35.8
0°-40°	2545.6	55.0
0°-60°	3992.7	86.2
0°-90°	4630.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4630.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2358	2358	2358	2358	2358	
5°	2318	2315	2315	2312	2312	220
15°	2168	2168	2146	2124	2116	609
25°	1879	1868	1838	1772	1723	862
35°	1524	1513	1440	1331	1298	953
45°	1170	1145	1047	960	922	901
55°	812	788	714	630	597	729
65°	483	455	412	420	349	476
75°	194	180	169	161	177	207
85°	27	30	33	35	38	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2358.5	2358.5	2358.5	2358.5	2358.5
2.5°	2342.1	2342.1	2342.1	2339.4	2339.4
5°	2317.6	2314.8	2314.8	2312.1	2312.1
7.5°	2298.5	2295.7	2293.0	2290.3	2284.8
10°	2271.2	2271.2	2268.5	2254.9	2252.1
12.5°	2227.6	2224.9	2214.0	2194.9	2189.4
15°	2167.6	2167.6	2145.8	2124.0	2115.8
17.5°	2102.2	2099.4	2072.2	2050.4	2039.5
20°	2031.3	2025.8	1998.6	1963.1	1944.0
22.5°	1952.2	1952.2	1919.5	1873.1	1854.0
25°	1878.6	1867.7	1837.7	1772.3	1723.2
27.5°	1794.1	1777.7	1745.0	1652.3	1595.0
30°	1701.4	1693.2	1646.8	1526.9	1483.2
32.5°	1614.1	1600.5	1551.4	1426.0	1390.5
35°	1524.1	1513.2	1439.6	1330.6	1297.8
37.5°	1434.2	1420.5	1327.8	1240.6	1199.7
40°	1344.2	1327.8	1226.9	1147.9	1104.3
42.5°	1259.7	1237.9	1139.7	1055.2	1006.1
45°	1169.7	1145.1	1047.0	959.7	921.6
47.5°	1079.7	1057.9	967.9	877.9	834.3
50°	984.3	965.2	883.4	793.4	747.1
52.5°	905.2	875.2	796.2	706.2	668.0
55°	812.5	788.0	714.4	629.8	597.1
57.5°	728.0	703.4	635.3	556.2	528.9
60°	648.9	613.5	556.2	488.1	466.2
62.5°	561.7	534.4	485.3	428.1	455.3
65°	482.6	455.3	411.7	419.9	349.0
67.5°	395.3	381.7	343.5	305.4	294.5
70°	321.7	305.4	291.7	250.8	239.9
72.5°	256.3	239.9	220.9	199.0	190.9
75°	193.6	180.0	169.0	160.9	177.2
77.5°	133.6	128.1	120.0	111.8	109.1
80°	87.2	84.5	81.8	79.1	76.3
82.5°	51.8	51.8	51.8	51.8	51.8
85°	27.3	30.0	32.7	35.4	38.2
87.5°	16.4	16.4	19.1	21.8	24.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)