

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: P562042

Luminaire Tested: FSR-24-4-LD4-1HI-40-UNV-80-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562042
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-40-UNV-80-94-EDD-90
Description: 2X4 FSR TROFFER WITH .125 PRISMATIC ACRYLIC FIXTURE SIDE AND .187 CLEAR TEMPERED G ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4071.0 lumens
Efficiency: N/A
Efficacy: 94.2 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

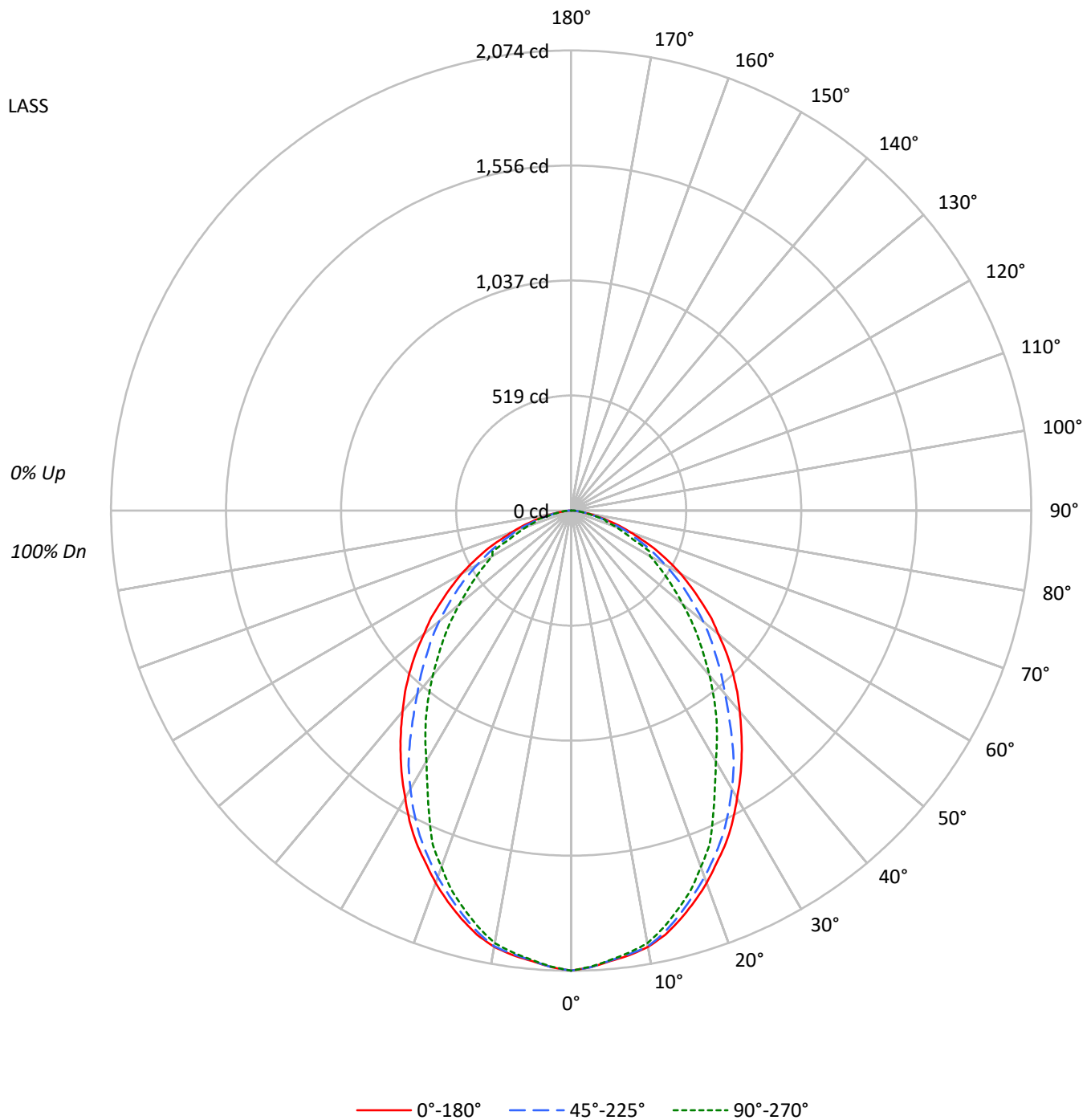
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2790	2790	2790
5°	2752	2749	2746
10°	2728	2725	2705
15°	2655	2628	2591
20°	2557	2516	2447
25°	2452	2399	2249
30°	2324	2250	2026
35°	2201	2079	1874
40°	2076	1895	1705
45°	1957	1752	1542
50°	1811	1626	1375
55°	1676	1473	1232
60°	1535	1316	1103
65°	1351	1152	977
70°	1113	1009	830
75°	885	773	810
80°	594	557	520
85°	371	445	519

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1957 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.0	4.7
10°-20°	529.8	13.0
20°-30°	733.4	18.0
30°-40°	782.0	19.2
40°-50°	713.5	17.5
50°-60°	558.9	13.7
60°-70°	364.3	8.9
70°-80°	161.4	4.0
80°-90°	34.6	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°	1456.2	35.8
0°-40°	2238.3	55.0
0°-60°	3510.7	86.2
0°-90°	4071.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4071.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2074	2074	2074	2074	2074	
5°	2038	2035	2035	2033	2033	193
15°	1906	1906	1887	1868	1860	536
25°	1652	1642	1616	1558	1515	758
35°	1340	1330	1266	1170	1141	838
45°	1028	1007	921	844	810	792
55°	714	693	628	554	525	641
65°	424	400	362	369	307	418
75°	170	158	149	141	156	182
85°	24	26	29	31	34	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2073.7	2073.7	2073.7	2073.7	2073.7
2.5°	2059.3	2059.3	2059.3	2056.9	2056.9
5°	2037.8	2035.4	2035.4	2033.0	2033.0
7.5°	2021.0	2018.6	2016.2	2013.8	2009.0
10°	1997.0	1997.0	1994.6	1982.6	1980.2
12.5°	1958.6	1956.2	1946.7	1929.9	1925.1
15°	1905.9	1905.9	1886.7	1867.5	1860.3
17.5°	1848.4	1846.0	1822.0	1802.8	1793.2
20°	1786.0	1781.2	1757.3	1726.1	1709.3
22.5°	1716.5	1716.5	1687.7	1647.0	1630.2
25°	1651.8	1642.2	1615.8	1558.3	1515.1
27.5°	1577.5	1563.1	1534.3	1452.8	1402.5
30°	1496.0	1488.8	1448.0	1342.5	1304.2
32.5°	1419.2	1407.2	1364.1	1253.8	1222.7
35°	1340.1	1330.5	1265.8	1169.9	1141.1
37.5°	1261.0	1249.0	1167.5	1090.8	1054.8
40°	1181.9	1167.5	1078.8	1009.3	970.9
42.5°	1107.6	1088.4	1002.1	927.8	884.6
45°	1028.5	1006.9	920.6	843.9	810.3
47.5°	949.4	930.2	851.1	771.9	733.6
50°	865.4	848.7	776.7	697.6	656.9
52.5°	795.9	769.6	700.0	620.9	587.4
55°	714.4	692.8	628.1	553.8	525.0
57.5°	640.1	618.5	558.6	489.1	465.1
60°	570.6	539.4	489.1	429.1	409.9
62.5°	493.9	469.9	426.7	376.4	400.4
65°	424.3	400.4	362.0	369.2	306.9
67.5°	347.6	335.6	302.1	268.5	258.9
70°	282.9	268.5	256.5	220.6	211.0
72.5°	225.4	211.0	194.2	175.0	167.8
75°	170.2	158.2	148.6	141.4	155.8
77.5°	117.5	112.7	105.5	98.3	95.9
80°	76.7	74.3	71.9	69.5	67.1
82.5°	45.5	45.5	45.5	45.5	45.5
85°	24.0	26.4	28.8	31.2	33.6
87.5°	14.4	14.4	16.8	19.2	21.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)