

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: P562479

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-93-97-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562479
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-LD4-1STD-50-UNV-93-97-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3838.0 lumens
Efficiency: N/A
Efficacy: 115.3 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

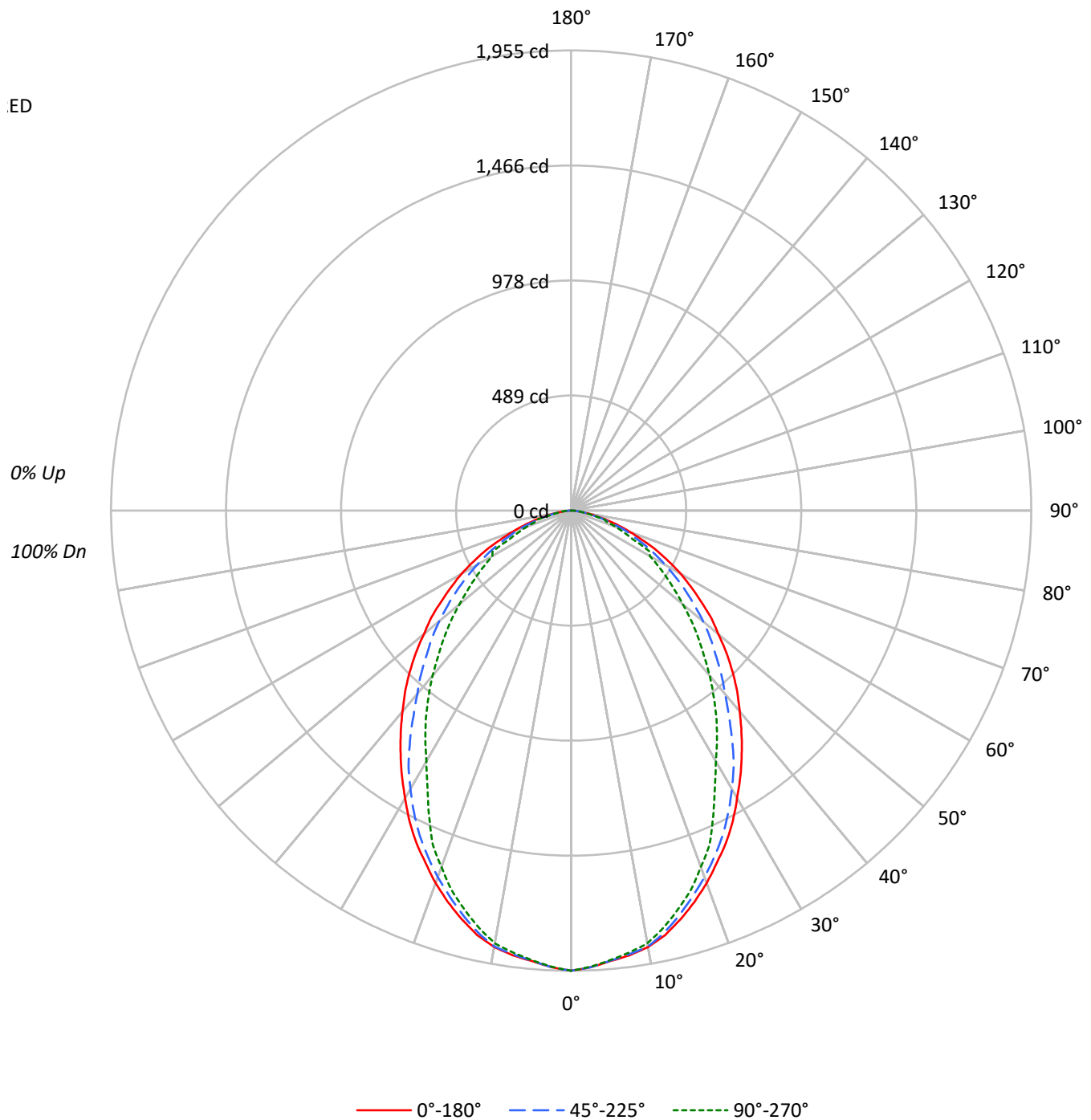
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2630	2630	2630
5°	2595	2592	2589
10°	2572	2569	2551
15°	2503	2478	2443
20°	2411	2372	2307
25°	2312	2261	2121
30°	2191	2121	1910
35°	2075	1960	1767
40°	1957	1786	1608
45°	1845	1651	1454
50°	1708	1533	1296
55°	1580	1389	1161
60°	1447	1241	1040
65°	1273	1087	921
70°	1049	951	782
75°	834	728	764
80°	560	525	490
85°	349	418	488

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1845 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	182.0	4.7
10°-20°	499.4	13.0
20°-30°	691.4	18.0
30°-40°	737.3	19.2
40°-50°	672.6	17.5
50°-60°	527.0	13.7
60°-70°	343.4	8.9
70°-80°	152.2	4.0
80°-90°	32.7	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°	1372.9	35.8
0°-40°	2110.2	55.0
0°-60°	3309.8	86.2
0°-90°	3838.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3838.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1955	1955	1955	1955	1955	
5°	1921	1919	1919	1917	1917	182
15°	1797	1797	1779	1761	1754	505
25°	1557	1548	1523	1469	1428	715
35°	1263	1254	1193	1103	1076	790
45°	970	949	868	796	764	747
55°	674	653	592	522	495	604
65°	400	377	341	348	289	394
75°	160	149	140	133	147	172
85°	23	25	27	29	32	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1955.0	1955.0	1955.0	1955.0	1955.0
2.5°	1941.5	1941.5	1941.5	1939.2	1939.2
5°	1921.1	1918.9	1918.9	1916.6	1916.6
7.5°	1905.3	1903.0	1900.8	1898.5	1894.0
10°	1882.7	1882.7	1880.4	1869.1	1866.9
12.5°	1846.5	1844.3	1835.2	1819.4	1814.9
15°	1796.8	1796.8	1778.7	1760.7	1753.9
17.5°	1742.6	1740.3	1717.7	1699.6	1690.6
20°	1683.8	1679.3	1656.7	1627.3	1611.5
22.5°	1618.3	1618.3	1591.1	1552.7	1536.9
25°	1557.2	1548.2	1523.3	1469.1	1428.4
27.5°	1487.2	1473.6	1446.5	1369.6	1322.2
30°	1410.3	1403.6	1365.1	1265.7	1229.5
32.5°	1338.0	1326.7	1286.0	1182.1	1152.7
35°	1263.4	1254.4	1193.4	1103.0	1075.8
37.5°	1188.8	1177.5	1100.7	1028.4	994.5
40°	1114.3	1100.7	1017.1	951.5	915.4
42.5°	1044.2	1026.1	944.7	874.7	834.0
45°	969.6	949.3	867.9	795.6	763.9
47.5°	895.0	876.9	802.4	727.8	691.6
50°	815.9	800.1	732.3	657.7	619.3
52.5°	750.4	725.5	660.0	585.4	553.7
55°	673.5	653.2	592.2	522.1	495.0
57.5°	603.5	583.1	526.6	461.1	438.5
60°	537.9	508.5	461.1	404.6	386.5
62.5°	465.6	443.0	402.3	354.8	377.4
65°	400.0	377.4	341.3	348.1	289.3
67.5°	327.7	316.4	284.8	253.1	244.1
70°	266.7	253.1	241.8	207.9	198.9
72.5°	212.5	198.9	183.1	165.0	158.2
75°	160.5	149.2	140.1	133.3	146.9
77.5°	110.7	106.2	99.4	92.7	90.4
80°	72.3	70.1	67.8	65.5	63.3
82.5°	42.9	42.9	42.9	42.9	42.9
85°	22.6	24.9	27.1	29.4	31.6
87.5°	13.6	13.6	15.8	18.1	20.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)