

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: P562339

Luminaire Tested: FSR-24-4-LD4-1STD-35-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562339
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-35-UNV-93-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3833.0 lumens
Efficiency: N/A
Efficacy: 115.1 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

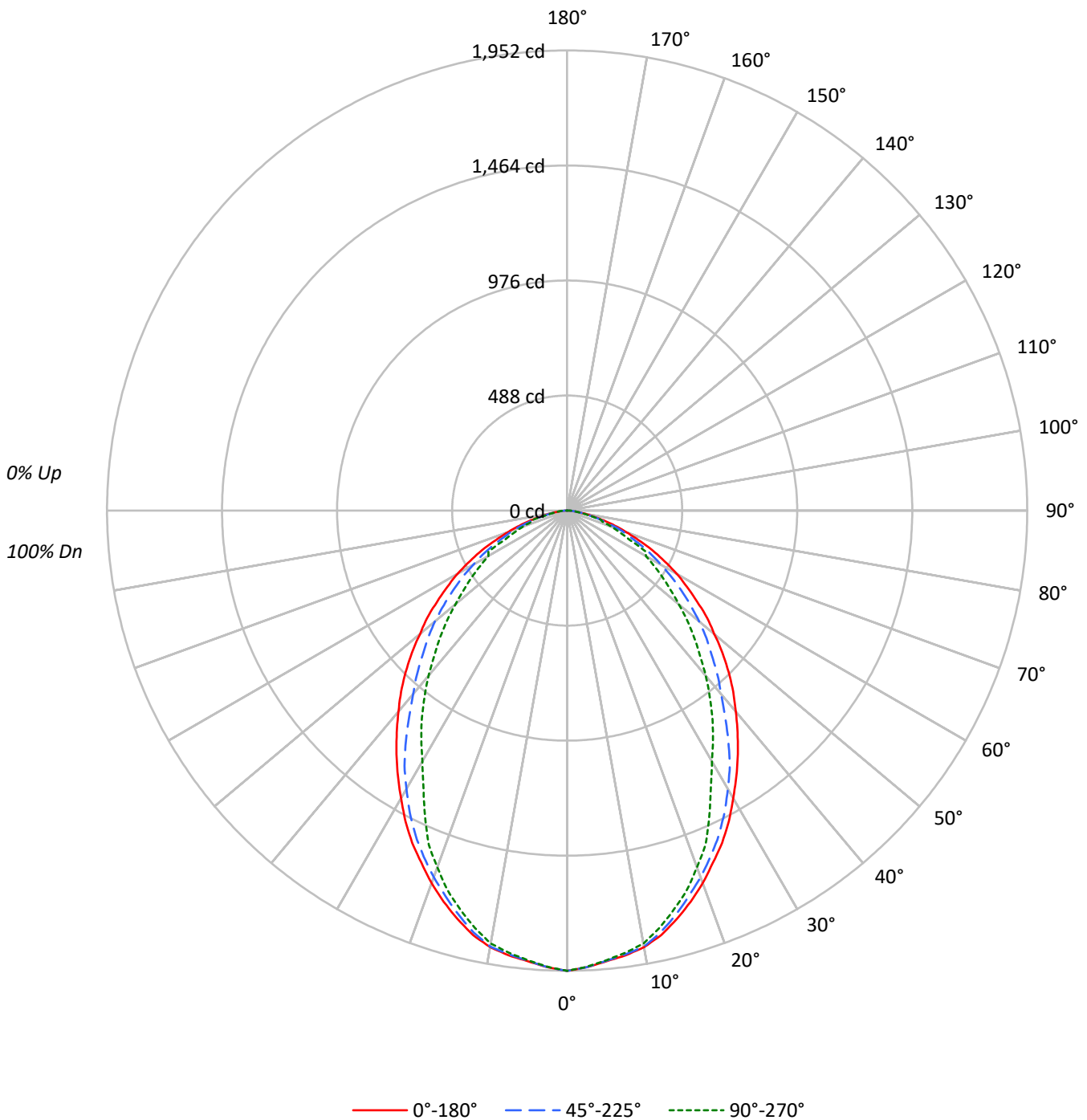
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2627	2627	2627
5°	2591	2588	2585
10°	2569	2566	2547
15°	2500	2474	2440
20°	2408	2369	2304
25°	2309	2259	2118
30°	2188	2118	1908
35°	2073	1958	1765
40°	1955	1784	1606
45°	1842	1649	1452
50°	1706	1531	1295
55°	1578	1387	1160
60°	1446	1239	1039
65°	1272	1085	920
70°	1048	950	781
75°	833	727	763
80°	559	525	490
85°	349	418	488

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1842 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	181.7	4.7
10°-20°	498.8	13.0
20°-30°	690.6	18.0
30°-40°	736.3	19.2
40°-50°	671.7	17.5
50°-60°	526.3	13.7
60°-70°	343.0	8.9
70°-80°	152.0	4.0
80°-90°	32.6	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°	1371.1	35.8
0°-40°	2107.4	55.0
0°-60°	3305.4	86.2
0°-90°	3833.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3833.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1952	1952	1952	1952	1952	
5°	1919	1916	1916	1914	1914	182
15°	1794	1794	1776	1758	1752	504
25°	1555	1546	1521	1467	1427	714
35°	1262	1253	1192	1102	1074	789
45°	968	948	867	794	763	746
55°	673	652	591	521	494	603
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°	1952.5	1952.5	1952.5	1952.5	1952.5
2.5°	1938.9	1938.9	1938.9	1936.7	1936.7
5°	1918.6	1916.4	1916.4	1914.1	1914.1
7.5°	1902.8	1900.6	1898.3	1896.0	1891.5
10°	1880.2	1880.2	1878.0	1866.7	1864.4
12.5°	1844.1	1841.9	1832.8	1817.0	1812.5
15°	1794.5	1794.5	1776.4	1758.4	1751.6
17.5°	1740.3	1738.0	1715.5	1697.4	1688.4
20°	1681.6	1677.1	1654.5	1625.2	1609.4
22.5°	1616.2	1616.2	1589.1	1550.7	1534.9
25°	1555.2	1546.2	1521.4	1467.2	1426.6
27.5°	1485.2	1471.7	1444.6	1367.9	1320.5
30°	1408.5	1401.7	1363.3	1264.0	1227.9
32.5°	1336.3	1325.0	1284.3	1180.5	1151.2
35°	1261.8	1252.7	1191.8	1101.5	1074.4
37.5°	1187.3	1176.0	1099.3	1027.0	993.2
40°	1112.8	1099.3	1015.7	950.3	914.2
42.5°	1042.8	1024.8	943.5	873.5	832.9
45°	968.3	948.0	866.8	794.5	762.9
47.5°	893.9	875.8	801.3	726.8	690.7
50°	814.8	799.0	731.3	656.8	618.5
52.5°	749.4	724.6	659.1	584.6	553.0
55°	672.6	652.3	591.4	521.4	494.3
57.5°	602.7	582.4	525.9	460.5	437.9
60°	537.2	507.9	460.5	404.0	386.0
62.5°	465.0	442.4	401.8	354.4	377.0
65°	399.5	377.0	340.8	347.6	288.9
67.5°	327.3	316.0	284.4	252.8	243.8
70°	266.3	252.8	241.5	207.7	198.6
72.5°	212.2	198.6	182.8	164.8	158.0
75°	160.3	149.0	139.9	133.2	146.7
77.5°	110.6	106.1	99.3	92.5	90.3
80°	72.2	70.0	67.7	65.5	63.2
82.5°	42.9	42.9	42.9	42.9	42.9
85°	22.6	24.8	27.1	29.3	31.6
87.5°	13.5	13.5	15.8	18.1	20.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)