

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: P562315

Luminaire Tested: FSR-24-4-LD4-1STD-35-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562315
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-81-94-EDD
Description: 2X4 FSR TROFFER WITH .156 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: 3716.0 lumens
Efficiency: N/A
Efficacy: 111.6 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

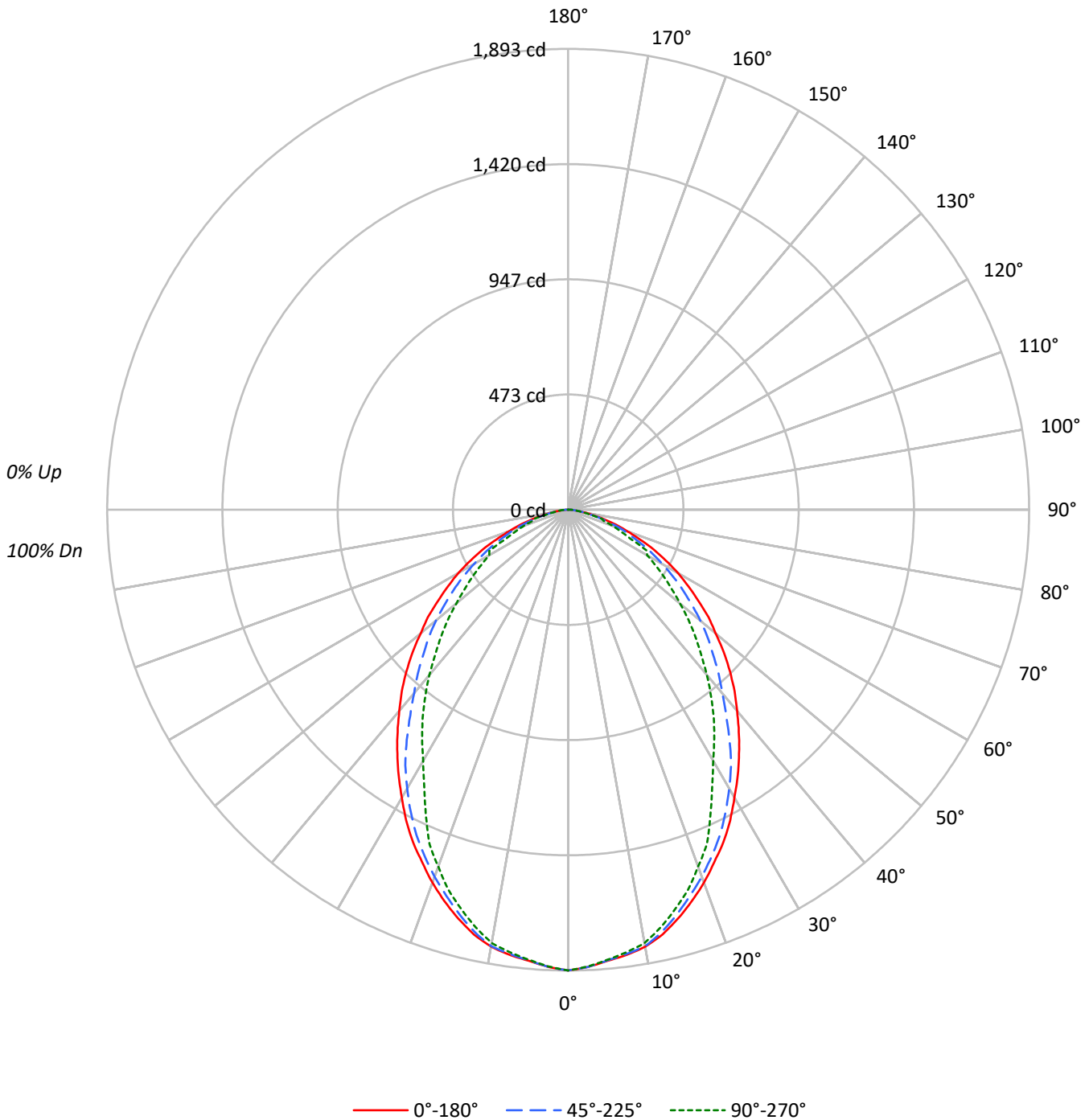
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2547	2547	2547
5°	2512	2509	2506
10°	2491	2488	2469
15°	2423	2399	2365
20°	2334	2297	2234
25°	2238	2190	2053
30°	2121	2053	1849
35°	2009	1898	1711
40°	1895	1730	1557
45°	1786	1599	1407
50°	1654	1484	1255
55°	1530	1345	1124
60°	1401	1201	1007
65°	1233	1052	892
70°	1016	921	758
75°	808	705	739
80°	542	508	475
85°	338	406	472

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1786 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.2	4.7
10°-20°	483.6	13.0
20°-30°	669.5	18.0
30°-40°	713.8	19.2
40°-50°	651.2	17.5
50°-60°	510.2	13.7
60°-70°	332.5	8.9
70°-80°	147.3	4.0
80°-90°	31.6	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°	1329.2	35.8
0°-40°	2043.1	55.0
0°-60°	3204.5	86.2
0°-90°	3716.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3716.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1893	1893	1893	1893	1893	
5°	1860	1858	1858	1856	1856	177
15°	1740	1740	1722	1705	1698	489
25°	1508	1499	1475	1422	1383	692
35°	1223	1214	1155	1068	1042	765
45°	939	919	840	770	740	723
55°	652	632	573	506	479	585
65°	387	365	330	337	280	382
75°	155	144	136	129	142	167
85°	22	24	26	28	31	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1892.9	1892.9	1892.9	1892.9	1892.9
2.5°	1879.8	1879.8	1879.8	1877.6	1877.6
5°	1860.1	1857.9	1857.9	1855.7	1855.7
7.5°	1844.7	1842.5	1840.4	1838.2	1833.8
10°	1822.9	1822.9	1820.7	1809.7	1807.5
12.5°	1787.8	1785.7	1776.9	1761.6	1757.2
15°	1739.7	1739.7	1722.2	1704.7	1698.1
17.5°	1687.2	1685.0	1663.1	1645.6	1636.8
20°	1630.3	1625.9	1604.0	1575.6	1560.3
22.5°	1566.8	1566.8	1540.6	1503.4	1488.0
25°	1507.7	1499.0	1474.9	1422.4	1383.0
27.5°	1439.9	1426.8	1400.5	1326.1	1280.2
30°	1365.5	1358.9	1321.7	1225.4	1190.4
32.5°	1295.5	1284.5	1245.1	1144.5	1116.0
35°	1223.3	1214.5	1155.4	1067.9	1041.6
37.5°	1151.0	1140.1	1065.7	995.7	962.9
40°	1078.8	1065.7	984.7	921.3	886.3
42.5°	1011.0	993.5	914.7	846.9	807.5
45°	938.8	919.1	840.3	770.3	739.6
47.5°	866.6	849.1	776.8	704.6	669.6
50°	790.0	774.7	709.0	636.8	599.6
52.5°	726.5	702.4	639.0	566.8	536.1
55°	652.1	632.4	573.3	505.5	479.2
57.5°	584.3	564.6	509.9	446.4	424.5
60°	520.8	492.4	446.4	391.7	374.2
62.5°	450.8	428.9	389.5	343.6	365.4
65°	387.3	365.4	330.4	337.0	280.1
67.5°	317.3	306.4	275.7	245.1	236.3
70°	258.2	245.1	234.1	201.3	192.6
72.5°	205.7	192.6	177.3	159.7	153.2
75°	155.4	144.4	135.7	129.1	142.2
77.5°	107.2	102.9	96.3	89.7	87.5
80°	70.0	67.8	65.6	63.5	61.3
82.5°	41.6	41.6	41.6	41.6	41.6
85°	21.9	24.1	26.3	28.4	30.6
87.5°	13.1	13.1	15.3	17.5	19.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)