

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: P562379

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562379
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-40-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 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3753.0 lumens
Efficiency: N/A
Efficacy: 112.7 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

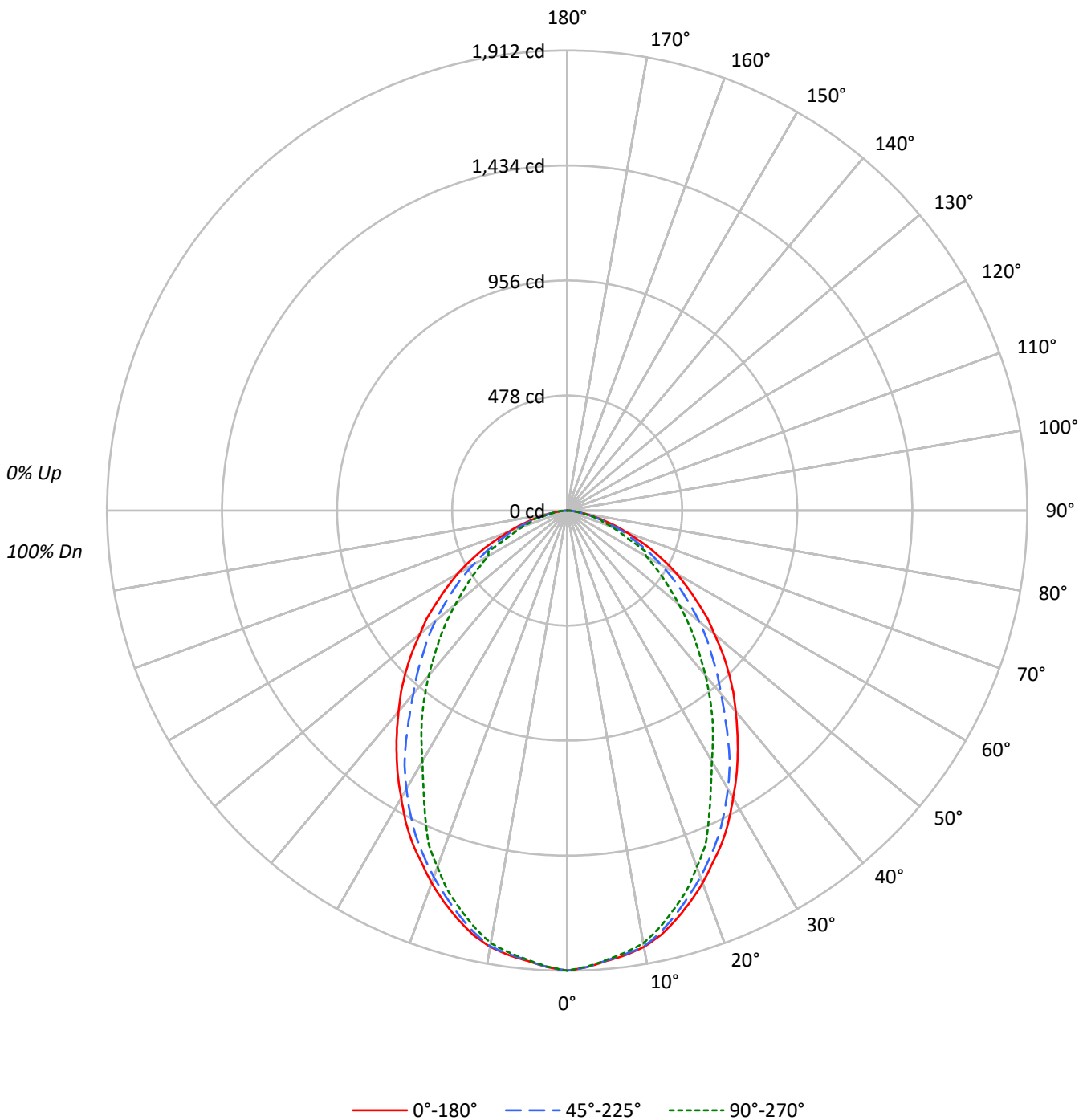
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2572	2572	2572
5°	2537	2534	2531
10°	2515	2512	2494
15°	2447	2423	2389
20°	2358	2320	2256
25°	2261	2211	2074
30°	2143	2074	1868
35°	2029	1917	1728
40°	1914	1747	1572
45°	1804	1615	1421
50°	1670	1499	1268
55°	1545	1358	1135
60°	1415	1213	1017
65°	1245	1062	901
70°	1026	930	765
75°	816	712	747
80°	548	514	480
85°	341	409	477

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1804 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	178.0	4.7
10°-20°	488.4	13.0
20°-30°	676.1	18.0
30°-40°	721.0	19.2
40°-50°	657.7	17.5
50°-60°	515.3	13.7
60°-70°	335.8	8.9
70°-80°	148.8	4.0
80°-90°	31.9	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°	1342.5	35.8
0°-40°	2063.4	55.0
0°-60°	3236.4	86.2
0°-90°	3753.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3753.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1912	1912	1912	1912	1912	
5°	1879	1876	1876	1874	1874	178
15°	1757	1757	1739	1722	1715	494
25°	1523	1514	1490	1437	1397	699
35°	1235	1227	1167	1078	1052	772
45°	948	928	849	778	747	730
55°	659	639	579	510	484	591
65°	391	369	334	340	283	386
75°	157	146	137	130	144	168
85°	22	24	26	29	31	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1911.7	1911.7	1911.7	1911.7	1911.7
2.5°	1898.5	1898.5	1898.5	1896.3	1896.3
5°	1878.6	1876.4	1876.4	1874.2	1874.2
7.5°	1863.1	1860.9	1858.7	1856.5	1852.1
10°	1841.0	1841.0	1838.8	1827.7	1825.5
12.5°	1805.6	1803.4	1794.6	1779.1	1774.7
15°	1757.0	1757.0	1739.3	1721.7	1715.0
17.5°	1704.0	1701.8	1679.7	1662.0	1653.1
20°	1646.5	1642.1	1620.0	1591.3	1575.8
22.5°	1582.4	1582.4	1555.9	1518.3	1502.9
25°	1522.8	1513.9	1489.6	1436.6	1396.8
27.5°	1454.2	1441.0	1414.5	1339.3	1292.9
30°	1379.1	1372.5	1334.9	1237.7	1202.3
32.5°	1308.4	1297.3	1257.5	1155.9	1127.1
35°	1235.4	1226.6	1166.9	1078.5	1052.0
37.5°	1162.5	1151.5	1076.3	1005.6	972.4
40°	1089.6	1076.3	994.5	930.4	895.1
42.5°	1021.1	1003.4	923.8	855.3	815.5
45°	948.1	928.2	848.7	778.0	747.0
47.5°	875.2	857.5	784.6	711.6	676.3
50°	797.8	782.4	716.1	643.1	605.6
52.5°	733.7	709.4	645.3	572.4	541.5
55°	658.6	638.7	579.0	510.5	484.0
57.5°	590.1	570.2	515.0	450.9	428.8
60°	526.0	497.3	450.9	395.6	377.9
62.5°	455.3	433.2	393.4	347.0	369.1
65°	391.2	369.1	333.7	340.4	282.9
67.5°	320.5	309.4	278.5	247.5	238.7
70°	260.8	247.5	236.5	203.3	194.5
72.5°	207.7	194.5	179.0	161.3	154.7
75°	156.9	145.9	137.0	130.4	143.7
77.5°	108.3	103.9	97.2	90.6	88.4
80°	70.7	68.5	66.3	64.1	61.9
82.5°	42.0	42.0	42.0	42.0	42.0
85°	22.1	24.3	26.5	28.7	30.9
87.5°	13.3	13.3	15.5	17.7	19.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)