

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: P562458

Luminaire Tested: FSR-24-4-LD4-1STD-50-UNV-82-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562458
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-82-94-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3251.0 lumens
Efficiency: N/A
Efficacy: 97.6 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

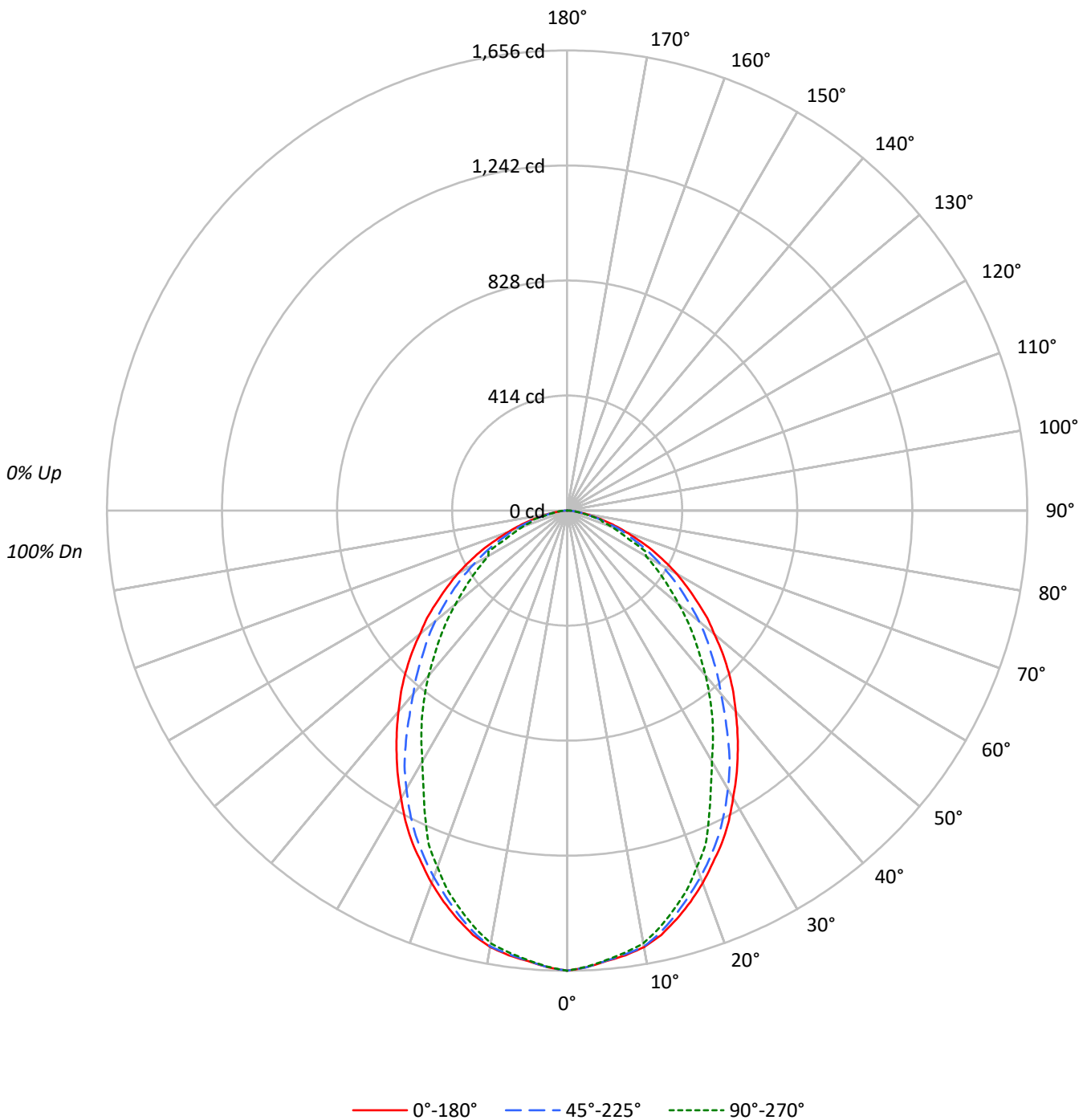
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2228	2228	2228
5°	2198	2195	2193
10°	2179	2176	2161
15°	2120	2099	2069
20°	2042	2009	1954
25°	1958	1916	1796
30°	1856	1796	1618
35°	1758	1660	1497
40°	1658	1513	1362
45°	1563	1399	1231
50°	1447	1298	1098
55°	1338	1177	984
60°	1226	1051	881
65°	1079	920	780
70°	889	806	663
75°	706	617	647
80°	475	445	415
85°	295	355	414

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1563 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.2	4.7
10°-20°	423.1	13.0
20°-30°	585.7	18.0
30°-40°	624.5	19.2
40°-50°	569.7	17.5
50°-60°	446.3	13.7
60°-70°	290.9	8.9
70°-80°	128.9	4.0
80°-90°	27.7	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°	1162.9	35.8
0°-40°	1787.4	55.0
0°-60°	2803.5	86.2
0°-90°	3251.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3251.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1656	1656	1656	1656	1656	
5°	1627	1625	1625	1624	1624	154
15°	1522	1522	1507	1491	1486	428
25°	1319	1311	1290	1244	1210	606
35°	1070	1062	1011	934	911	669
45°	821	804	735	674	647	633
55°	570	553	502	442	419	512
65°	339	320	289	295	245	334
75°	136	126	119	113	124	146
85°	19	21	23	25	27	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1656.0	1656.0	1656.0	1656.0	1656.0
2.5°	1644.5	1644.5	1644.5	1642.6	1642.6
5°	1627.3	1625.4	1625.4	1623.5	1623.5
7.5°	1613.9	1612.0	1610.1	1608.2	1604.3
10°	1594.8	1594.8	1592.8	1583.3	1581.4
12.5°	1564.1	1562.2	1554.5	1541.1	1537.3
15°	1522.0	1522.0	1506.7	1491.4	1485.6
17.5°	1476.1	1474.1	1455.0	1439.7	1432.0
20°	1426.3	1422.5	1403.3	1378.4	1365.0
22.5°	1370.8	1370.8	1347.8	1315.2	1301.8
25°	1319.1	1311.4	1290.4	1244.4	1209.9
27.5°	1259.7	1248.2	1225.3	1160.2	1120.0
30°	1194.6	1188.9	1156.3	1072.1	1041.5
32.5°	1133.4	1123.8	1089.3	1001.3	976.4
35°	1070.2	1062.5	1010.8	934.3	911.3
37.5°	1007.0	997.4	932.3	871.1	842.4
40°	943.8	932.3	861.5	806.0	775.4
42.5°	884.5	869.2	800.2	740.9	706.4
45°	821.3	804.1	735.2	673.9	647.1
47.5°	758.1	742.8	679.6	616.5	585.8
50°	691.1	677.7	620.3	557.1	524.6
52.5°	635.6	614.5	559.0	495.8	469.0
55°	570.5	553.3	501.6	442.2	419.3
57.5°	511.2	493.9	446.1	390.6	371.4
60°	455.6	430.8	390.6	342.7	327.4
62.5°	394.4	375.2	340.8	300.6	319.7
65°	338.9	319.7	289.1	294.8	245.1
67.5°	277.6	268.0	241.2	214.4	206.8
70°	225.9	214.4	204.8	176.1	168.5
72.5°	180.0	168.5	155.1	139.8	134.0
75°	135.9	126.4	118.7	113.0	124.4
77.5°	93.8	90.0	84.2	78.5	76.6
80°	61.3	59.3	57.4	55.5	53.6
82.5°	36.4	36.4	36.4	36.4	36.4
85°	19.1	21.1	23.0	24.9	26.8
87.5°	11.5	11.5	13.4	15.3	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)