

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: P562397

Luminaire Tested: FSR-24-4-LD4-1STD-40-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562397
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-82-96-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 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: 3633.0 lumens
Efficiency: N/A
Efficacy: 109.1 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

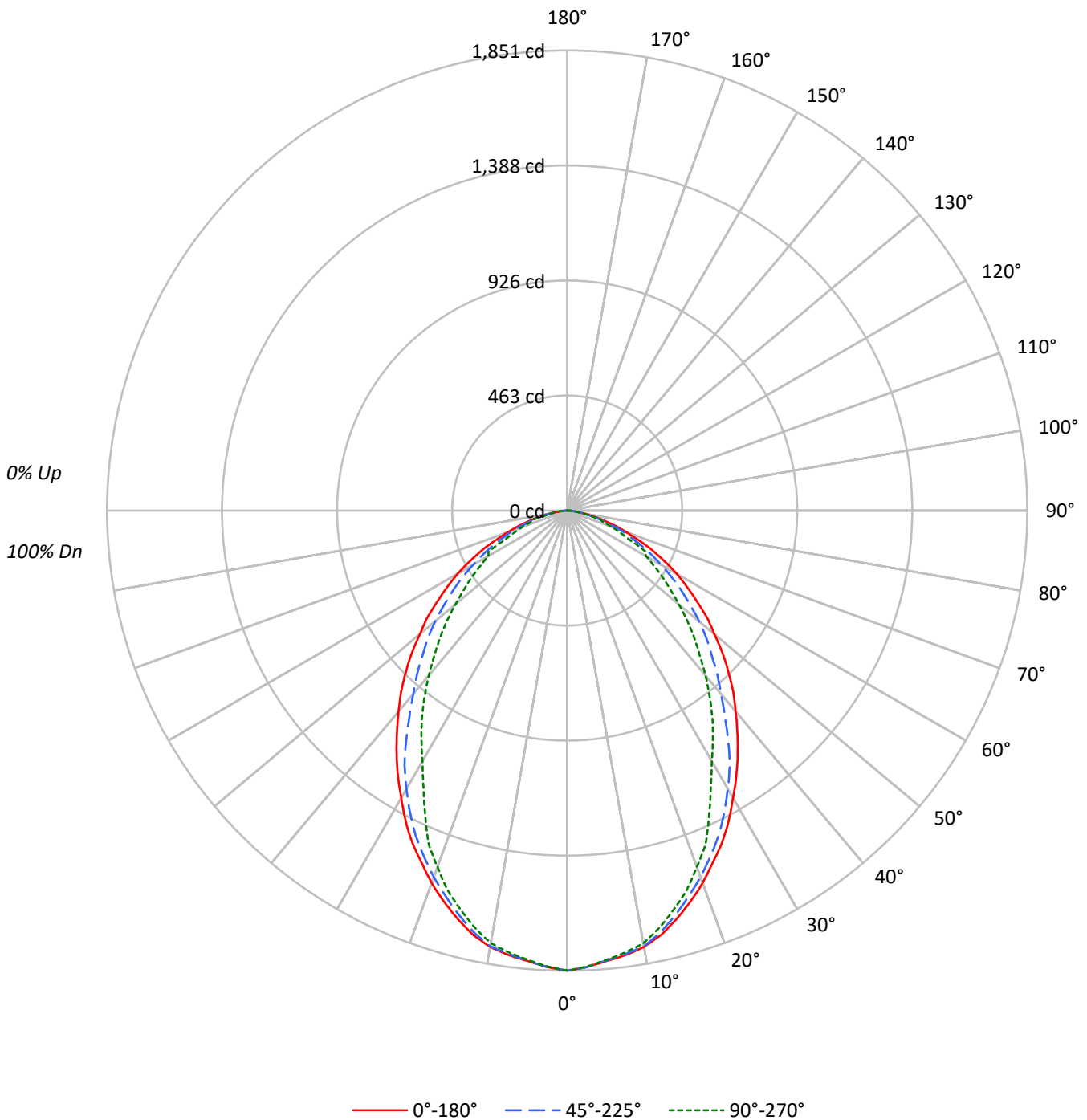
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2490	2490	2490
5°	2456	2453	2450
10°	2435	2432	2414
15°	2369	2345	2313
20°	2282	2245	2184
25°	2188	2141	2007
30°	2074	2008	1808
35°	1964	1855	1673
40°	1852	1691	1522
45°	1746	1563	1376
50°	1617	1451	1227
55°	1495	1315	1099
60°	1370	1174	984
65°	1206	1029	872
70°	993	900	741
75°	790	689	723
80°	531	497	464
85°	330	397	463

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1746 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.3	4.7
10°-20°	472.8	13.0
20°-30°	654.5	18.0
30°-40°	697.9	19.2
40°-50°	636.7	17.5
50°-60°	498.8	13.7
60°-70°	325.1	8.9
70°-80°	144.0	4.0
80°-90°	30.9	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°	1299.6	35.8
0°-40°	1997.4	55.0
0°-60°	3132.9	86.2
0°-90°	3633.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3633.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1851	1851	1851	1851	1851	
5°	1818	1816	1816	1814	1814	173
15°	1701	1701	1684	1667	1660	478
25°	1474	1466	1442	1391	1352	677
35°	1196	1187	1130	1044	1018	748
45°	918	899	822	753	723	707
55°	638	618	560	494	468	572
65°	379	357	323	330	274	373
75°	152	141	133	126	139	163
85°	21	24	26	28	30	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1850.6	1850.6	1850.6	1850.6	1850.6
2.5°	1837.8	1837.8	1837.8	1835.6	1835.6
5°	1818.5	1816.4	1816.4	1814.2	1814.2
7.5°	1803.5	1801.4	1799.3	1797.1	1792.8
10°	1782.1	1782.1	1780.0	1769.3	1767.2
12.5°	1747.9	1745.8	1737.2	1722.2	1718.0
15°	1700.8	1700.8	1683.7	1666.6	1660.2
17.5°	1649.5	1647.4	1626.0	1608.8	1600.3
20°	1593.9	1589.6	1568.2	1540.4	1525.4
22.5°	1531.8	1531.8	1506.2	1469.8	1454.8
25°	1474.1	1465.5	1442.0	1390.6	1352.1
27.5°	1407.7	1394.9	1369.2	1296.5	1251.6
30°	1335.0	1328.6	1292.2	1198.1	1163.8
32.5°	1266.5	1255.8	1217.3	1118.9	1091.1
35°	1195.9	1187.4	1129.6	1044.0	1018.4
37.5°	1125.3	1114.6	1041.9	973.4	941.3
40°	1054.7	1041.9	962.7	900.7	866.5
42.5°	988.4	971.3	894.3	828.0	789.4
45°	917.8	898.6	821.5	753.1	723.1
47.5°	847.2	830.1	759.5	688.9	654.7
50°	772.3	757.4	693.2	622.6	586.2
52.5°	710.3	686.8	624.7	554.1	524.2
55°	637.5	618.3	560.5	494.2	468.5
57.5°	571.2	552.0	498.5	436.4	415.0
60°	509.2	481.4	436.4	383.0	365.8
62.5°	440.7	419.3	380.8	335.9	357.3
65°	378.7	357.3	323.1	329.5	273.8
67.5°	310.2	299.5	269.6	239.6	231.1
70°	252.5	239.6	228.9	196.8	188.3
72.5°	201.1	188.3	173.3	156.2	149.8
75°	151.9	141.2	132.6	126.2	139.1
77.5°	104.8	100.6	94.1	87.7	85.6
80°	68.5	66.3	64.2	62.0	59.9
82.5°	40.6	40.6	40.6	40.6	40.6
85°	21.4	23.5	25.7	27.8	30.0
87.5°	12.8	12.8	15.0	17.1	19.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)