

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: P562307

Luminaire Tested: FSR-24-4-LD4-1STD-35-UNV-81-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562307
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-81-85-EDD
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3634.0 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

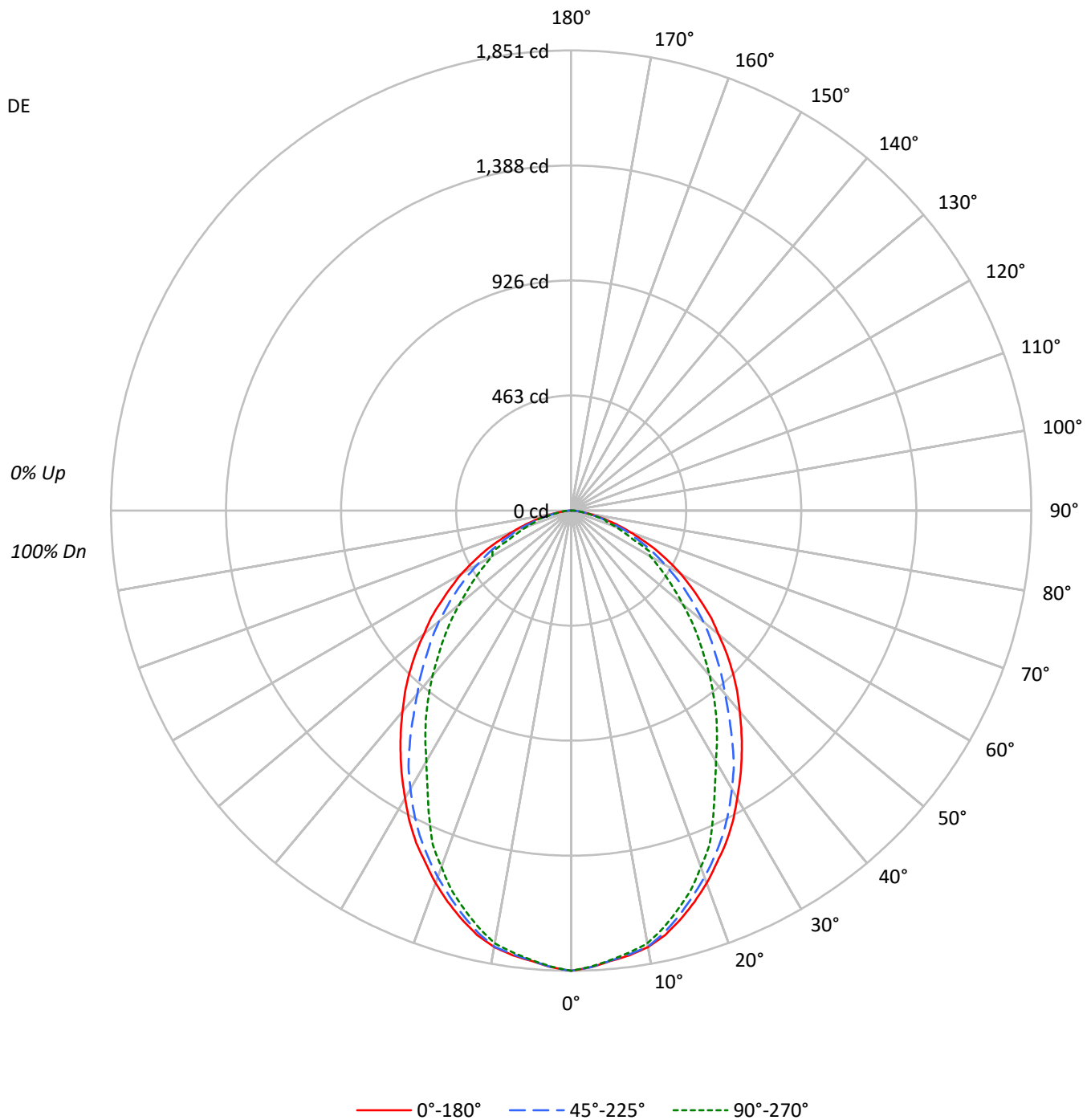
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2491	2491	2491
5°	2457	2454	2451
10°	2435	2433	2415
15°	2370	2346	2313
20°	2283	2246	2185
25°	2189	2141	2008
30°	2075	2008	1809
35°	1965	1856	1673
40°	1853	1691	1522
45°	1747	1564	1376
50°	1617	1451	1227
55°	1496	1315	1099
60°	1371	1175	985
65°	1206	1029	872
70°	993	901	741
75°	790	690	723
80°	531	497	464
85°	330	397	463

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1747 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.3	4.7
10°-20°	472.9	13.0
20°-30°	654.7	18.0
30°-40°	698.1	19.2
40°-50°	636.9	17.5
50°-60°	498.9	13.7
60°-70°	325.2	8.9
70°-80°	144.1	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°	1299.9	35.8
0°-40°	1998.0	55.0
0°-60°	3133.8	86.2
0°-90°	3634.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3634.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1851	1851	1851	1851	1851	
5°	1819	1817	1817	1815	1815	173
15°	1701	1701	1684	1667	1661	478
25°	1474	1466	1442	1391	1352	677
35°	1196	1188	1130	1044	1019	748
45°	918	899	822	753	723	707
55°	638	618	561	494	469	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°	1851.1	1851.1	1851.1	1851.1	1851.1
2.5°	1838.3	1838.3	1838.3	1836.1	1836.1
5°	1819.0	1816.9	1816.9	1814.7	1814.7
7.5°	1804.0	1801.9	1799.8	1797.6	1793.3
10°	1782.6	1782.6	1780.5	1769.8	1767.7
12.5°	1748.4	1746.3	1737.7	1722.7	1718.4
15°	1701.3	1701.3	1684.2	1667.1	1660.6
17.5°	1649.9	1647.8	1626.4	1609.3	1600.7
20°	1594.3	1590.0	1568.6	1540.8	1525.8
22.5°	1532.2	1532.2	1506.6	1470.2	1455.2
25°	1474.5	1465.9	1442.4	1391.0	1352.5
27.5°	1408.1	1395.3	1369.6	1296.8	1251.9
30°	1335.4	1328.9	1292.6	1198.4	1164.2
32.5°	1266.9	1256.2	1217.7	1119.2	1091.4
35°	1196.3	1187.7	1129.9	1044.3	1018.6
37.5°	1125.6	1114.9	1042.2	973.7	941.6
40°	1055.0	1042.2	963.0	900.9	866.7
42.5°	988.7	971.6	894.5	828.2	789.7
45°	918.1	898.8	821.8	753.3	723.3
47.5°	847.4	830.3	759.7	689.1	654.8
50°	772.5	757.6	693.4	622.7	586.4
52.5°	710.5	686.9	624.9	554.3	524.3
55°	637.7	618.5	560.7	494.3	468.7
57.5°	571.4	552.1	498.6	436.6	415.2
60°	509.3	481.5	436.6	383.1	365.9
62.5°	440.8	419.4	380.9	336.0	357.4
65°	378.8	357.4	323.1	329.6	273.9
67.5°	310.3	299.6	269.6	239.7	231.1
70°	252.5	239.7	229.0	196.9	188.3
72.5°	201.2	188.3	173.3	156.2	149.8
75°	151.9	141.2	132.7	126.3	139.1
77.5°	104.9	100.6	94.2	87.7	85.6
80°	68.5	66.3	64.2	62.1	59.9
82.5°	40.7	40.7	40.7	40.7	40.7
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)