

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: P562304

Luminaire Tested: FSR-24-4-LD4-1STD-35-UNV-81-84-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562304
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-81-84-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3102.0 lumens
Efficiency: N/A
Efficacy: 93.2 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

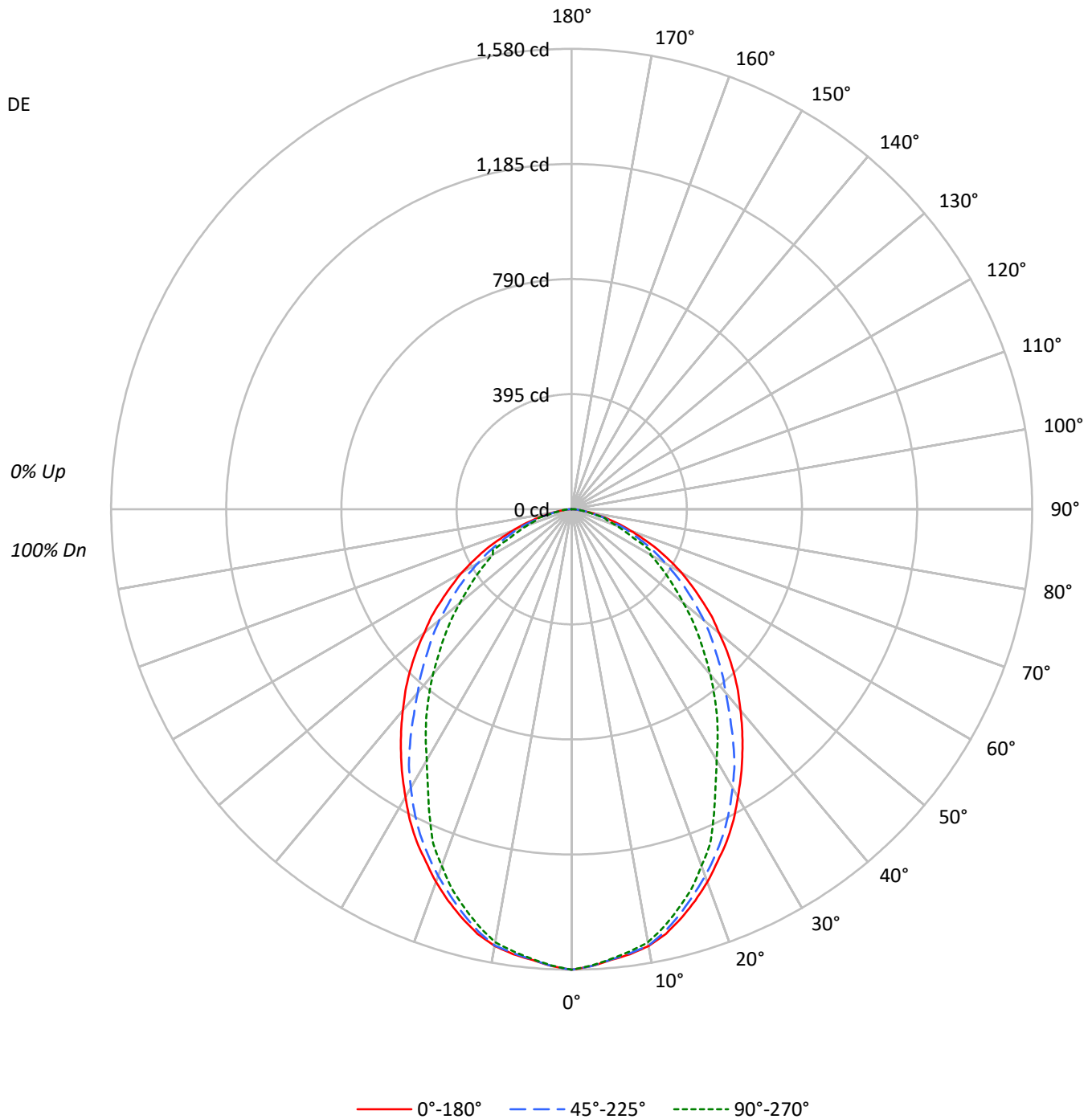
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2126	2126	2126
5°	2097	2095	2092
10°	2079	2076	2062
15°	2023	2003	1975
20°	1949	1917	1865
25°	1868	1828	1714
30°	1771	1714	1544
35°	1677	1584	1428
40°	1582	1444	1299
45°	1491	1335	1175
50°	1380	1239	1048
55°	1277	1123	939
60°	1170	1003	841
65°	1029	878	744
70°	848	769	633
75°	674	589	617
80°	453	425	396
85°	283	338	395

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1491 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.1	4.7
10°-20°	403.7	13.0
20°-30°	558.9	18.0
30°-40°	595.9	19.2
40°-50°	543.6	17.5
50°-60°	425.9	13.7
60°-70°	277.6	8.9
70°-80°	123.0	4.0
80°-90°	26.4	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°	1109.6	35.8
0°-40°	1705.5	55.0
0°-60°	2675.0	86.2
0°-90°	3102.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3102.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1580	1580	1580	1580	1580	
5°	1553	1551	1551	1549	1549	147
15°	1452	1452	1438	1423	1418	408
25°	1259	1251	1231	1187	1154	578
35°	1021	1014	964	891	870	638
45°	784	767	702	643	617	604
55°	544	528	479	422	400	488
65°	323	305	276	281	234	319
75°	130	121	113	108	119	139
85°	18	20	22	24	26	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1580.1	1580.1	1580.1	1580.1	1580.1
2.5°	1569.2	1569.2	1569.2	1567.3	1567.3
5°	1552.7	1550.9	1550.9	1549.1	1549.1
7.5°	1539.9	1538.1	1536.3	1534.4	1530.8
10°	1521.7	1521.7	1519.8	1510.7	1508.9
12.5°	1492.4	1490.6	1483.3	1470.5	1466.9
15°	1452.2	1452.2	1437.6	1423.0	1417.5
17.5°	1408.4	1406.6	1388.3	1373.7	1366.4
20°	1360.9	1357.3	1339.0	1315.2	1302.5
22.5°	1307.9	1307.9	1286.0	1255.0	1242.2
25°	1258.6	1251.3	1231.2	1187.4	1154.5
27.5°	1202.0	1191.0	1169.1	1107.0	1068.6
30°	1139.9	1134.4	1103.3	1023.0	993.7
32.5°	1081.4	1072.3	1039.4	955.4	931.6
35°	1021.1	1013.8	964.5	891.4	869.5
37.5°	960.9	951.7	889.6	831.2	803.8
40°	900.6	889.6	822.0	769.1	739.8
42.5°	843.9	829.3	763.6	706.9	674.1
45°	783.7	767.2	701.5	643.0	617.4
47.5°	723.4	708.8	648.5	588.2	559.0
50°	659.4	646.7	591.9	531.6	500.5
52.5°	606.5	586.4	533.4	473.1	447.5
55°	544.4	527.9	478.6	422.0	400.1
57.5°	487.7	471.3	425.6	372.7	354.4
60°	434.8	411.0	372.7	327.0	312.4
62.5°	376.3	358.0	325.2	286.8	305.1
65°	323.3	305.1	275.8	281.3	233.8
67.5°	264.9	255.7	230.2	204.6	197.3
70°	215.6	204.6	195.5	168.1	160.8
72.5°	171.7	160.8	148.0	133.4	127.9
75°	129.7	120.6	113.3	107.8	118.7
77.5°	89.5	85.9	80.4	74.9	73.1
80°	58.5	56.6	54.8	53.0	51.1
82.5°	34.7	34.7	34.7	34.7	34.7
85°	18.3	20.1	21.9	23.7	25.6
87.5°	11.0	11.0	12.8	14.6	16.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)