

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: P562327

Luminaire Tested: FSR-24-4-LD4-1STD-35-UNV-82-87-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562327
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-82-87-EDD
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3403.0 lumens
Efficiency: N/A
Efficacy: 102.2 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

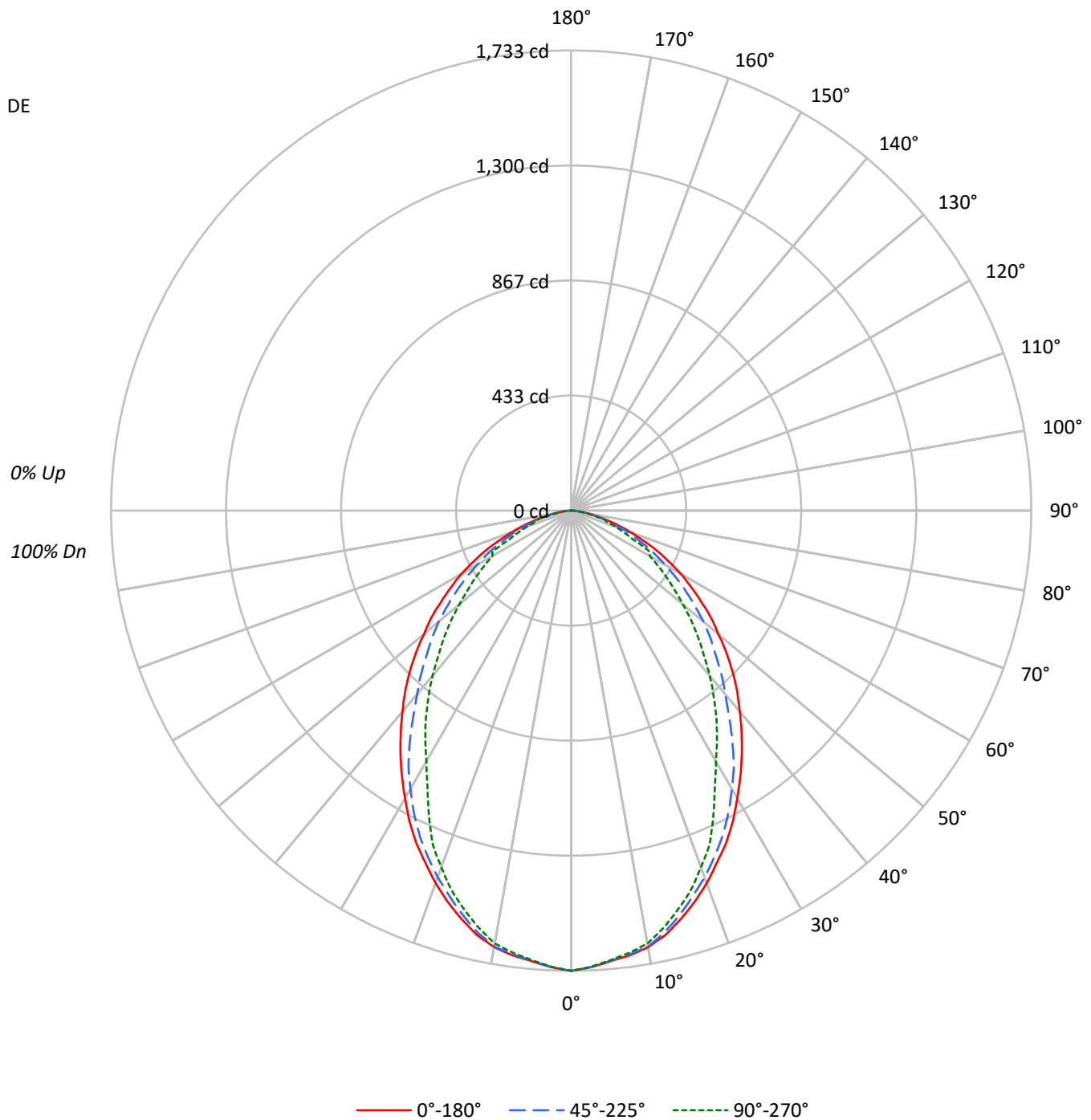
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	2332	2332	2332
5°	2301	2298	2295
10°	2281	2278	2262
15°	2219	2197	2166
20°	2138	2103	2046
25°	2050	2005	1880
30°	1943	1881	1694
35°	1840	1738	1567
40°	1735	1584	1426
45°	1636	1464	1289
50°	1514	1359	1149
55°	1401	1232	1030
60°	1283	1100	922
65°	1129	963	817
70°	930	843	694
75°	740	646	677
80°	497	466	435
85°	309	371	434

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1636 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.4	4.7
10°-20°	442.8	13.0
20°-30°	613.1	18.0
30°-40°	653.7	19.2
40°-50°	596.4	17.5
50°-60°	467.2	13.7
60°-70°	304.5	8.9
70°-80°	134.9	4.0
80°-90°	29.0	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°	1217.3	35.8
0°-40°	1871.0	55.0
0°-60°	2934.6	86.2
0°-90°	3403.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3403.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1733	1733	1733	1733	1733	
5°	1703	1701	1701	1699	1699	162
15°	1593	1593	1577	1561	1555	448
25°	1381	1373	1351	1303	1266	634
35°	1120	1112	1058	978	954	700
45°	860	842	770	705	677	662
55°	597	579	525	463	439	536
65°	355	335	303	309	256	350
75°	142	132	124	118	130	153
85°	20	22	24	26	28	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1733.4	1733.4	1733.4	1733.4	1733.4
2.5°	1721.4	1721.4	1721.4	1719.4	1719.4
5°	1703.4	1701.4	1701.4	1699.4	1699.4
7.5°	1689.4	1687.4	1685.3	1683.3	1679.3
10°	1669.3	1669.3	1667.3	1657.3	1655.3
12.5°	1637.3	1635.2	1627.2	1613.2	1609.2
15°	1593.2	1593.2	1577.1	1561.1	1555.1
17.5°	1545.1	1543.1	1523.0	1507.0	1499.0
20°	1493.0	1489.0	1468.9	1442.9	1428.8
22.5°	1434.8	1434.8	1410.8	1376.7	1362.7
25°	1380.7	1372.7	1350.7	1302.6	1266.5
27.5°	1318.6	1306.6	1282.5	1214.4	1172.3
30°	1250.5	1244.5	1210.4	1122.2	1090.2
32.5°	1186.4	1176.3	1140.3	1048.1	1022.0
35°	1120.2	1112.2	1058.1	977.9	953.9
37.5°	1054.1	1044.1	975.9	911.8	881.8
40°	988.0	975.9	901.8	843.7	811.6
42.5°	925.8	909.8	837.7	775.5	739.5
45°	859.7	841.7	769.5	705.4	677.3
47.5°	793.6	777.5	711.4	645.3	613.2
50°	723.4	709.4	649.3	583.2	549.1
52.5°	665.3	643.3	585.2	519.0	491.0
55°	597.2	579.2	525.0	462.9	438.9
57.5°	535.1	517.0	466.9	408.8	388.8
60°	476.9	450.9	408.8	358.7	342.7
62.5°	412.8	392.8	356.7	314.6	334.7
65°	354.7	334.7	302.6	308.6	256.5
67.5°	290.6	280.6	252.5	224.4	216.4
70°	236.5	224.4	214.4	184.4	176.4
72.5°	188.4	176.4	162.3	146.3	140.3
75°	142.3	132.3	124.2	118.2	130.3
77.5°	98.2	94.2	88.2	82.2	80.2
80°	64.1	62.1	60.1	58.1	56.1
82.5°	38.1	38.1	38.1	38.1	38.1
85°	20.0	22.0	24.0	26.1	28.1
87.5°	12.0	12.0	14.0	16.0	18.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)