

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: P562305

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

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562305
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
Description: 2X4 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .125 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3707.0 lumens
Efficiency: N/A
Efficacy: 111.3 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

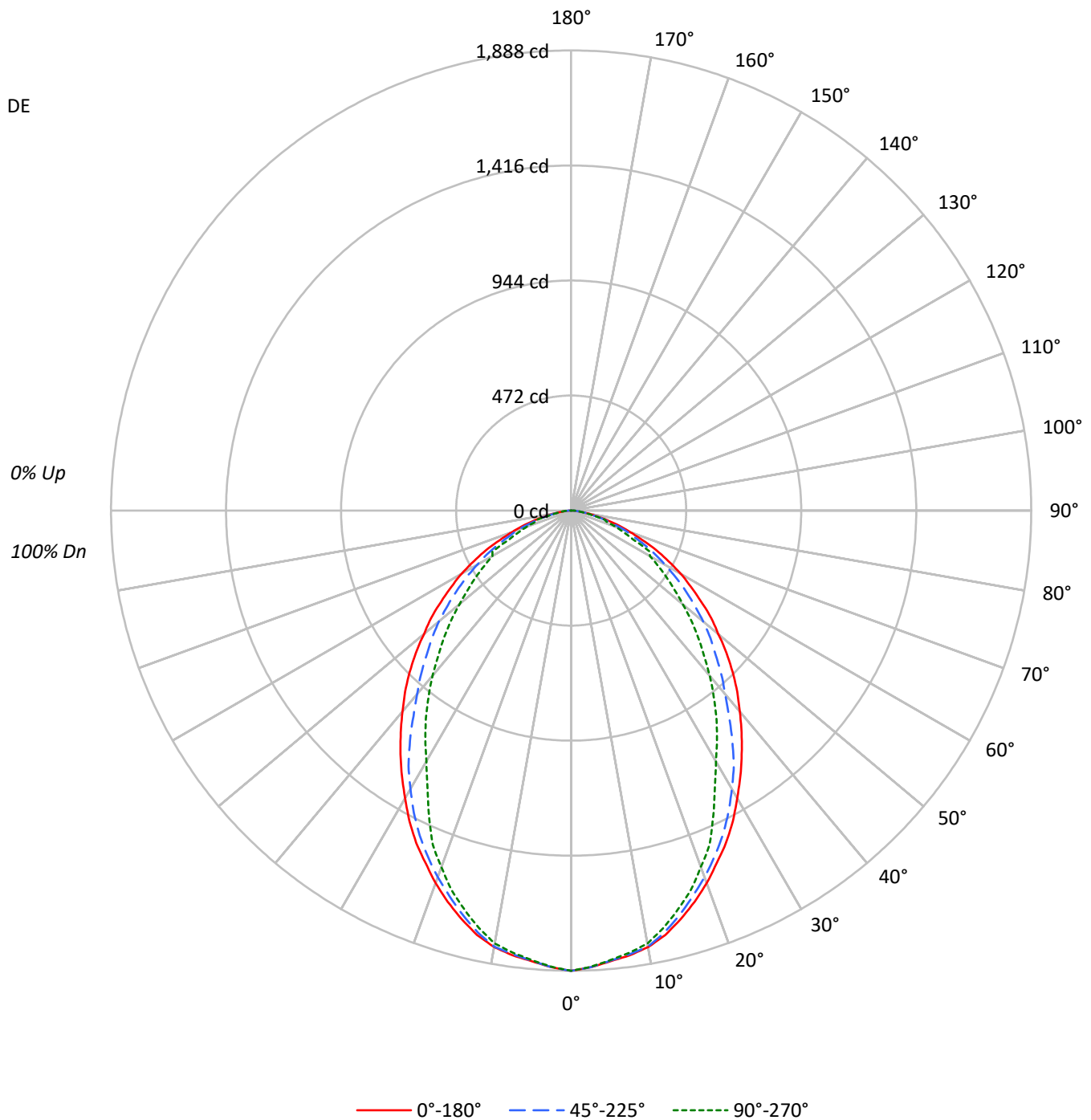
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2541	2541	2541
5°	2506	2503	2500
10°	2484	2482	2464
15°	2417	2393	2360
20°	2329	2291	2229
25°	2233	2184	2048
30°	2116	2048	1845
35°	2004	1893	1707
40°	1890	1725	1553
45°	1782	1595	1404
50°	1650	1481	1252
55°	1526	1342	1122
60°	1398	1198	1005
65°	1230	1049	890
70°	1013	919	756
75°	806	703	738
80°	542	508	473
85°	337	404	472

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1782 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.8	4.7
10°-20°	482.4	13.0
20°-30°	667.8	18.0
30°-40°	712.1	19.2
40°-50°	649.7	17.5
50°-60°	509.0	13.7
60°-70°	331.7	8.9
70°-80°	147.0	4.0
80°-90°	31.6	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°	1326.0	35.8
0°-40°	2038.1	55.0
0°-60°	3196.8	86.2
0°-90°	3707.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3707.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1888	1888	1888	1888	1888	
5°	1856	1853	1853	1851	1851	176
15°	1736	1736	1718	1701	1694	488
25°	1504	1495	1471	1419	1380	691
35°	1220	1212	1153	1065	1039	763
45°	936	917	838	768	738	721
55°	650	631	572	504	478	584
65°	386	365	330	336	279	381
75°	155	144	135	129	142	166
85°	22	24	26	28	31	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1888.3	1888.3	1888.3	1888.3	1888.3
2.5°	1875.2	1875.2	1875.2	1873.0	1873.0
5°	1855.6	1853.4	1853.4	1851.2	1851.2
7.5°	1840.3	1838.1	1835.9	1833.7	1829.4
10°	1818.4	1818.4	1816.3	1805.3	1803.2
12.5°	1783.5	1781.3	1772.6	1757.3	1753.0
15°	1735.5	1735.5	1718.0	1700.6	1694.0
17.5°	1683.1	1680.9	1659.1	1641.6	1632.9
20°	1626.3	1622.0	1600.1	1571.8	1556.5
22.5°	1563.0	1563.0	1536.8	1499.7	1484.4
25°	1504.1	1495.4	1471.3	1419.0	1379.7
27.5°	1436.4	1423.3	1397.1	1322.9	1277.1
30°	1362.2	1355.6	1318.5	1222.5	1187.6
32.5°	1292.3	1281.4	1242.1	1141.7	1113.3
35°	1220.3	1211.6	1152.6	1065.3	1039.1
37.5°	1148.3	1137.3	1063.1	993.3	960.5
40°	1076.2	1063.1	982.4	919.0	884.1
42.5°	1008.5	991.1	912.5	844.8	805.5
45°	936.5	916.9	838.3	768.4	737.9
47.5°	864.5	847.0	775.0	702.9	668.0
50°	788.1	772.8	707.3	635.3	598.1
52.5°	724.8	700.7	637.4	565.4	534.8
55°	650.5	630.9	571.9	504.3	478.1
57.5°	582.9	563.2	508.6	445.3	423.5
60°	519.6	491.2	445.3	390.8	373.3
62.5°	449.7	427.9	388.6	342.7	364.6
65°	386.4	364.6	329.6	336.2	279.4
67.5°	316.5	305.6	275.1	244.5	235.8
70°	257.6	244.5	233.6	200.8	192.1
72.5°	205.2	192.1	176.8	159.4	152.8
75°	155.0	144.1	135.3	128.8	141.9
77.5°	107.0	102.6	96.1	89.5	87.3
80°	69.9	67.7	65.5	63.3	61.1
82.5°	41.5	41.5	41.5	41.5	41.5
85°	21.8	24.0	26.2	28.4	30.6
87.5°	13.1	13.1	15.3	17.5	19.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)