

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: P562006

Luminaire Tested: FSR-24-4-LD4-1HI-35-UNV-82-87-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P562006
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-LD4-1HI-35-UNV-82-87-EDD-90
Description: 2X4 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .375 CLEAR PC ENVIRONMENTAL SI
LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3493.0 lumens
Efficiency: N/A
Efficacy: 80.9 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

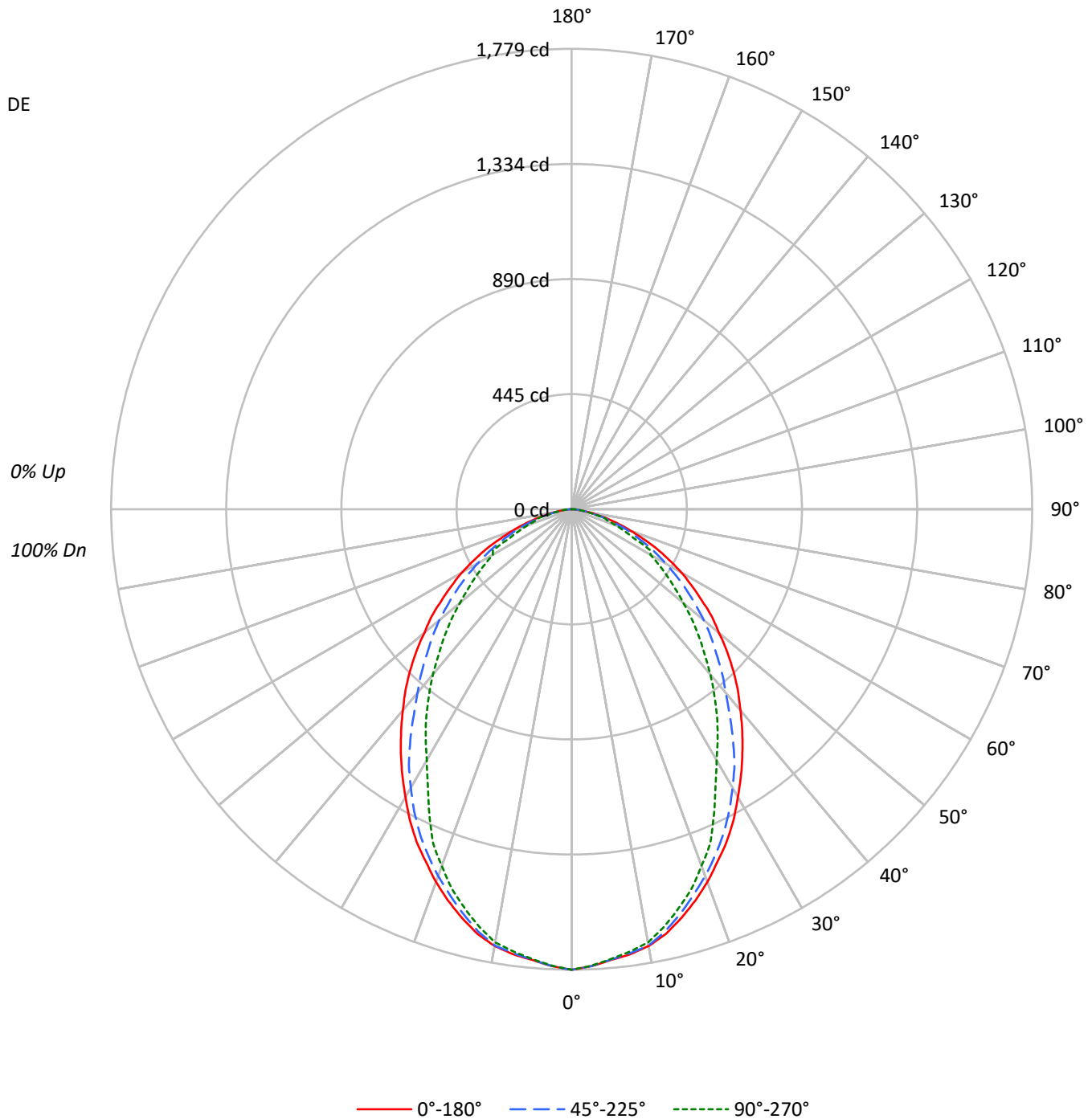
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	2394	2394	2394
5°	2361	2359	2356
10°	2341	2338	2321
15°	2278	2255	2223
20°	2194	2159	2100
25°	2104	2058	1930
30°	1994	1930	1739
35°	1889	1784	1608
40°	1781	1626	1463
45°	1679	1503	1323
50°	1554	1395	1180
55°	1438	1264	1057
60°	1318	1129	946
65°	1159	989	838
70°	955	866	712
75°	759	663	695
80°	510	478	446
85°	318	381	445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1679 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.6	4.7
10°-20°	454.6	13.0
20°-30°	629.3	18.0
30°-40°	671.0	19.2
40°-50°	612.2	17.5
50°-60°	479.6	13.7
60°-70°	312.6	8.9
70°-80°	138.5	4.0
80°-90°	29.7	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°	1249.5	35.8
0°-40°	1920.5	55.0
0°-60°	3012.2	86.2
0°-90°	3493.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3493.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1779	1779	1779	1779	1779	
5°	1748	1746	1746	1744	1744	166
15°	1635	1635	1619	1602	1596	460
25°	1417	1409	1386	1337	1300	651
35°	1150	1142	1086	1004	979	719
45°	882	864	790	724	695	680
55°	613	594	539	475	450	550
65°	364	344	311	317	263	359
75°	146	136	128	121	134	157
85°	21	23	25	27	29	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1779.3	1779.3	1779.3	1779.3	1779.3
2.5°	1766.9	1766.9	1766.9	1764.9	1764.9
5°	1748.4	1746.4	1746.4	1744.3	1744.3
7.5°	1734.0	1732.0	1729.9	1727.9	1723.7
10°	1713.5	1713.5	1711.4	1701.1	1699.1
12.5°	1680.6	1678.5	1670.3	1655.9	1651.8
15°	1635.3	1635.3	1618.8	1602.4	1596.2
17.5°	1585.9	1583.9	1563.3	1546.8	1538.6
20°	1532.4	1528.3	1507.8	1481.0	1466.6
22.5°	1472.8	1472.8	1448.1	1413.1	1398.7
25°	1417.3	1409.0	1386.4	1337.0	1300.0
27.5°	1353.5	1341.2	1316.5	1246.5	1203.3
30°	1283.6	1277.4	1242.4	1151.9	1119.0
32.5°	1217.7	1207.4	1170.4	1075.8	1049.1
35°	1149.9	1141.6	1086.1	1003.8	979.1
37.5°	1082.0	1071.7	1001.7	935.9	905.1
40°	1014.1	1001.7	925.6	866.0	833.1
42.5°	950.3	933.9	859.8	796.1	759.0
45°	882.4	863.9	789.9	724.1	695.3
47.5°	814.6	798.1	730.2	662.3	629.4
50°	742.6	728.2	666.5	598.6	563.6
52.5°	682.9	660.3	600.6	532.8	504.0
55°	613.0	594.5	538.9	475.2	450.5
57.5°	549.2	530.7	479.3	419.6	399.1
60°	489.6	462.8	419.6	368.2	351.7
62.5°	423.7	403.2	366.1	322.9	343.5
65°	364.1	343.5	310.6	316.8	263.3
67.5°	298.3	288.0	259.2	230.4	222.2
70°	242.7	230.4	220.1	189.2	181.0
72.5°	193.4	181.0	166.6	150.2	144.0
75°	146.0	135.8	127.5	121.4	133.7
77.5°	100.8	96.7	90.5	84.3	82.3
80°	65.8	63.8	61.7	59.7	57.6
82.5°	39.1	39.1	39.1	39.1	39.1
85°	20.6	22.6	24.7	26.7	28.8
87.5°	12.3	12.3	14.4	16.5	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)