

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: P560651

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-81-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560651
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-12-2-LD4-2STD-40-UNV-81-94-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR PC FIXTURE SIDE AND .187 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2934.0 lumens
Efficiency: N/A
Efficacy: 88.1 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 1' x L: 2' x H: 0')
CIE Type: Direct

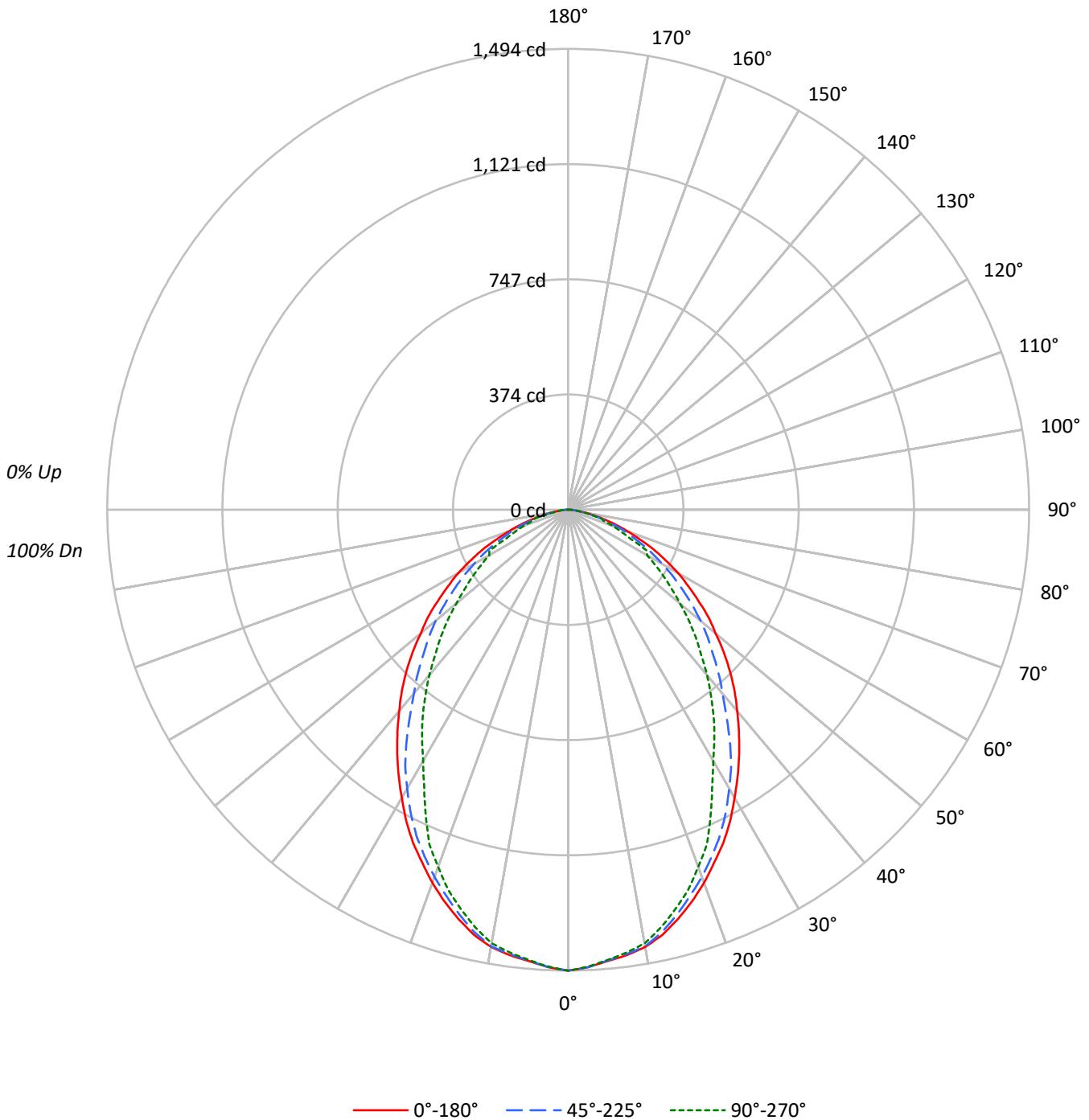
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	8043	8043	8043
5°	7934	7925	7916
10°	7866	7856	7800
15°	7653	7577	7471
20°	7372	7254	7056
25°	7069	6915	6485
30°	6700	6486	5841
35°	6345	5994	5403
40°	5984	5462	4917
45°	5641	5050	4445
50°	5222	4687	3964
55°	4831	4248	3551
60°	4426	3794	3181
65°	3894	3323	2817
70°	3209	2910	2392
75°	2551	2227	2335
80°	1714	1605	1500
85°	1068	1278	1494

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5641 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.1	4.7
10°-20°	381.8	13.0
20°-30°	528.6	18.0
30°-40°	563.6	19.2
40°-50°	514.2	17.5
50°-60°	402.8	13.7
60°-70°	262.5	8.9
70°-80°	116.3	4.0
80°-90°	25.0	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°	1049.5	35.8
0°-40°	1613.1	55.0
0°-60°	2530.2	86.2
0°-90°	2934.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2934.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1494	1494	1494	1494	1494	
5°	1469	1467	1467	1465	1465	139
15°	1374	1374	1360	1346	1341	386
25°	1190	1184	1164	1123	1092	547
35°	966	959	912	843	822	604
45°	741	726	664	608	584	571
55°	515	499	453	399	378	462
65°	306	288	261	266	221	301
75°	123	114	107	102	112	131
85°	17	19	21	22	24	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1494.5	1494.5	1494.5	1494.5	1494.5
2.5°	1484.2	1484.2	1484.2	1482.4	1482.4
5°	1468.6	1466.9	1466.9	1465.2	1465.2
7.5°	1456.5	1454.8	1453.1	1451.3	1447.9
10°	1439.3	1439.3	1437.5	1428.9	1427.2
12.5°	1411.6	1409.9	1403.0	1390.9	1387.4
15°	1373.6	1373.6	1359.8	1346.0	1340.8
17.5°	1332.1	1330.4	1313.1	1299.3	1292.4
20°	1287.2	1283.7	1266.5	1244.0	1231.9
22.5°	1237.1	1237.1	1216.4	1187.0	1174.9
25°	1190.4	1183.5	1164.5	1123.1	1092.0
27.5°	1136.9	1126.5	1105.8	1047.0	1010.8
30°	1078.1	1073.0	1043.6	967.6	939.9
32.5°	1022.9	1014.2	983.1	903.6	881.2
35°	965.8	958.9	912.3	843.2	822.4
37.5°	908.8	900.2	841.4	786.1	760.2
40°	851.8	841.4	777.5	727.4	699.8
42.5°	798.2	784.4	722.2	668.7	637.6
45°	741.2	725.7	663.5	608.2	584.0
47.5°	684.2	670.4	613.4	556.3	528.7
50°	623.7	611.6	559.8	502.8	473.4
52.5°	573.6	554.6	504.5	447.5	423.3
55°	514.9	499.3	452.7	399.1	378.4
57.5°	461.3	445.8	402.6	352.5	335.2
60°	411.2	388.8	352.5	309.3	295.5
62.5°	355.9	338.6	307.5	271.3	288.5
65°	305.8	288.5	260.9	266.1	221.2
67.5°	250.5	241.9	217.7	193.5	186.6
70°	203.9	193.5	184.9	159.0	152.0
72.5°	162.4	152.0	140.0	126.1	120.9
75°	122.7	114.0	107.1	101.9	112.3
77.5°	84.7	81.2	76.0	70.8	69.1
80°	55.3	53.6	51.8	50.1	48.4
82.5°	32.8	32.8	32.8	32.8	32.8
85°	17.3	19.0	20.7	22.5	24.2
87.5°	10.4	10.4	12.1	13.8	15.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)