

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: P560669

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-82-96-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560669
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-82-96-EDD
Description: 1X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 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: 2840.0 lumens
Efficiency: N/A
Efficacy: 85.3 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

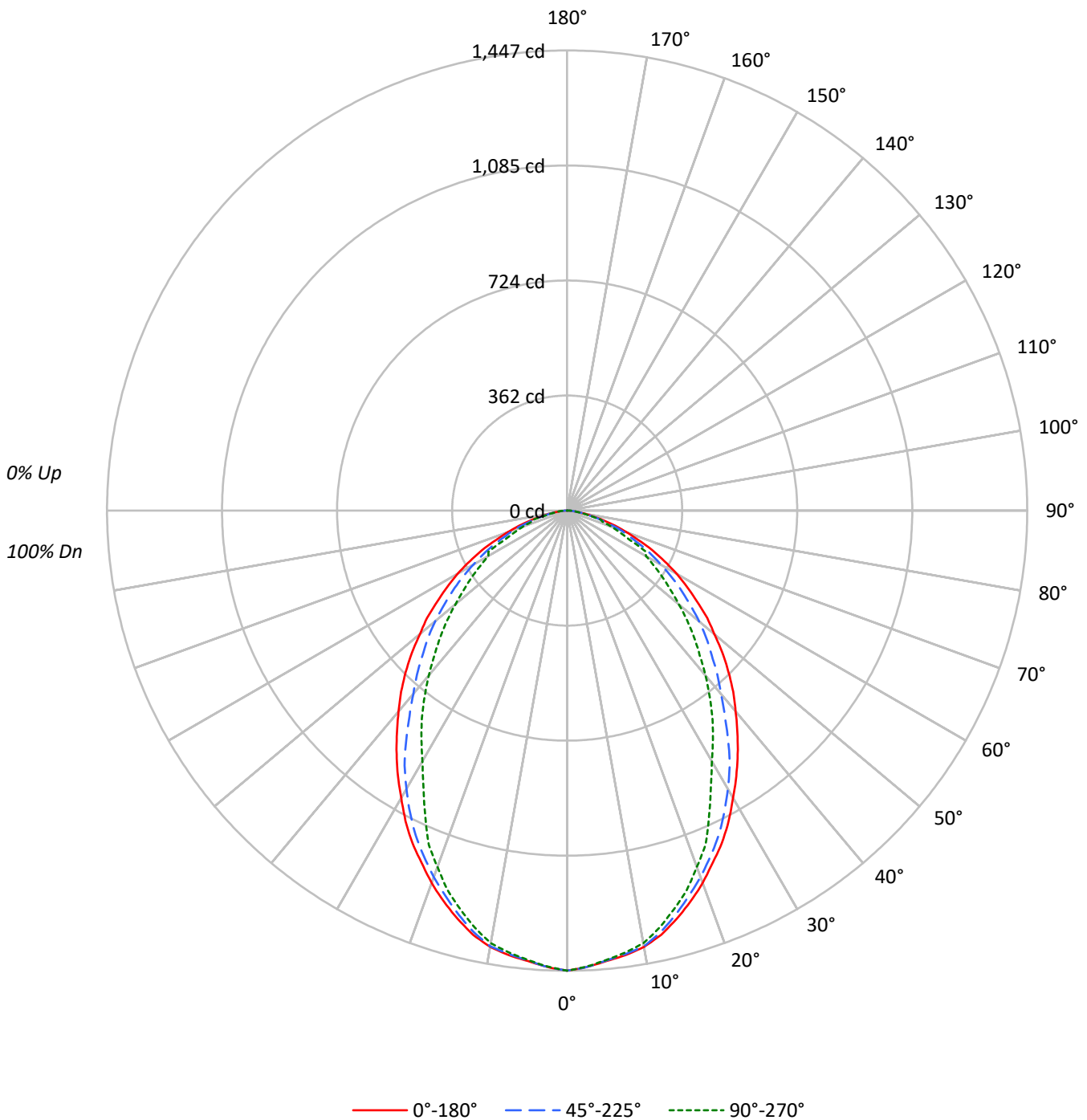
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20																		
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°	7786	7786	7786
5°	7680	7671	7662
10°	7613	7605	7549
15°	7408	7334	7231
20°	7136	7021	6829
25°	6843	6694	6277
30°	6486	6278	5654
35°	6142	5801	5231
40°	5793	5288	4758
45°	5461	4888	4303
50°	5055	4537	3836
55°	4677	4112	3437
60°	4284	3673	3078
65°	3769	3216	2727
70°	3105	2817	2316
75°	2468	2156	2260
80°	1658	1556	1450
85°	1031	1241	1445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5461 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.7	4.7
10°-20°	369.6	13.0
20°-30°	511.7	18.0
30°-40°	545.6	19.2
40°-50°	497.7	17.5
50°-60°	389.9	13.7
60°-70°	254.1	8.9
70°-80°	112.6	4.0
80°-90°	24.2	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°	1015.9	35.8
0°-40°	1561.5	55.0
0°-60°	2449.1	86.2
0°-90°	2840.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2840.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1447	1447	1447	1447	1447	
5°	1422	1420	1420	1418	1418	135
15°	1330	1330	1316	1303	1298	374
25°	1152	1146	1127	1087	1057	529
35°	935	928	883	816	796	584
45°	718	702	642	589	565	553
55°	498	483	438	386	366	447
65°	296	279	252	258	214	292
75°	119	110	104	99	109	127
85°	17	18	20	22	23	23
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1446.7	1446.7	1446.7	1446.7	1446.7
2.5°	1436.6	1436.6	1436.6	1435.0	1435.0
5°	1421.6	1419.9	1419.9	1418.2	1418.2
7.5°	1409.9	1408.2	1406.5	1404.8	1401.5
10°	1393.1	1393.1	1391.5	1383.1	1381.4
12.5°	1366.4	1364.7	1358.0	1346.3	1343.0
15°	1329.6	1329.6	1316.2	1302.8	1297.8
17.5°	1289.4	1287.8	1271.1	1257.7	1251.0
20°	1246.0	1242.6	1225.9	1204.2	1192.4
22.5°	1197.5	1197.5	1177.4	1149.0	1137.3
25°	1152.3	1145.6	1127.2	1087.1	1057.0
27.5°	1100.5	1090.4	1070.4	1013.5	978.4
30°	1043.6	1038.6	1010.2	936.6	909.8
32.5°	990.1	981.7	951.6	874.7	852.9
35°	934.9	928.2	883.0	816.1	796.1
37.5°	879.7	871.3	814.5	761.0	735.9
40°	824.5	814.5	752.6	704.1	677.3
42.5°	772.7	759.3	699.1	647.2	617.1
45°	717.5	702.4	642.2	588.7	565.3
47.5°	662.3	648.9	593.7	538.5	511.8
50°	603.7	592.0	541.9	486.7	458.2
52.5°	555.2	536.9	488.4	433.2	409.7
55°	498.4	483.3	438.2	386.3	366.3
57.5°	446.5	431.5	389.7	341.2	324.5
60°	398.0	376.3	341.2	299.4	286.0
62.5°	344.5	327.8	297.7	262.6	279.3
65°	296.0	279.3	252.5	257.6	214.1
67.5°	242.5	234.1	210.7	187.3	180.6
70°	197.3	187.3	179.0	153.9	147.2
72.5°	157.2	147.2	135.5	122.1	117.1
75°	118.7	110.4	103.7	98.7	108.7
77.5°	81.9	78.6	73.6	68.6	66.9
80°	53.5	51.8	50.2	48.5	46.8
82.5°	31.8	31.8	31.8	31.8	31.8
85°	16.7	18.4	20.1	21.7	23.4
87.5°	10.0	10.0	11.7	13.4	15.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)