

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: P590347

Luminaire Tested: FSR-24-2-LD4-2STD-35-UNV-82-96-EDD

Issue Date: 12/8/2021

Test Information

Test Method: LM-79-2019
Report Number: P590347
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2102-135-1)
Test Lab: INNOVATION CENTER
Issue Date: 12/8/2021
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: FAIL-SAFE
Catalog Number: FSR-24-2-LD4-2STD-35-UNV-82-96-EDD
Description: 2X2 FSR TROFFER WITH .187 CLEAR PC FIXTURE SIDE AND .250 CLEAR TEMPERED GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3597.0 lumens
Efficiency: N/A
Efficacy: 108.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

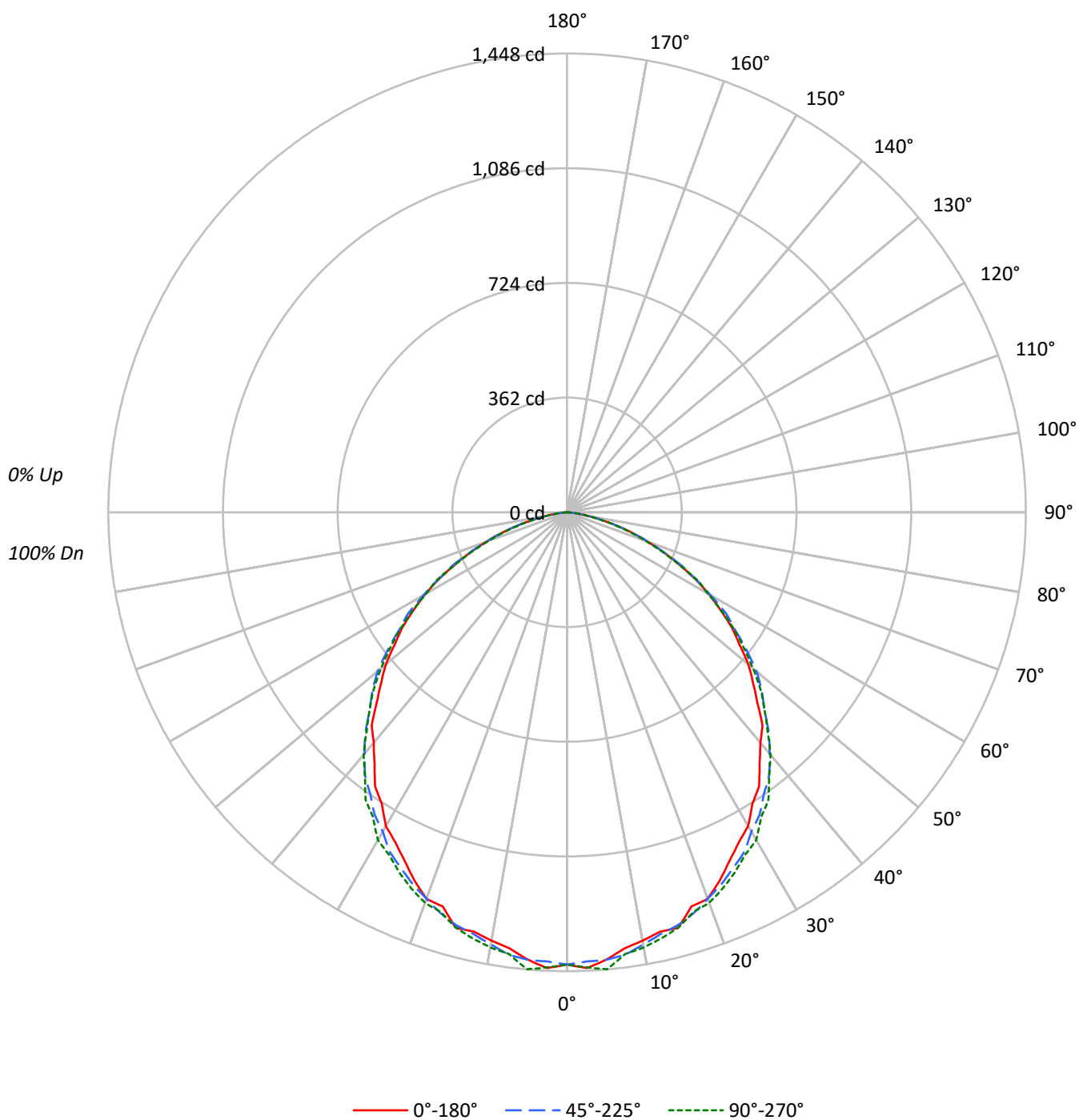
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	110	105	101	98	107	103	100	96	99	96	93	95	93	90	91	90	88	86		
2	100	93	86	81	98	91	85	80	87	82	78	84	80	76	81	78	75	73		
3	92	82	74	68	89	80	73	67	77	71	66	75	69	65	72	68	64	62		
4	84	73	64	58	82	71	64	58	69	62	57	67	61	56	65	59	55	53		
5	78	65	57	50	76	64	56	50	62	55	49	60	54	49	58	53	48	46		
6	72	59	50	44	70	58	50	44	56	49	43	54	48	43	53	47	43	41		
7	67	53	45	39	65	53	45	39	51	44	39	50	43	38	48	42	38	36		
8	62	49	41	35	61	48	40	35	47	40	34	46	39	34	44	39	34	32		
9	58	45	37	31	57	44	37	31	43	36	31	42	36	31	41	35	31	29		
10	54	41	34	29	53	41	33	28	40	33	28	39	33	28	38	32	28	26		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3841	3841	3841
5°	3828	3829	3910
10°	3750	3783	3810
15°	3780	3759	3780
20°	3716	3716	3756
25°	3602	3681	3721
30°	3552	3615	3711
35°	3469	3559	3640
40°	3334	3494	3510
45°	3233	3348	3353
50°	3127	3268	3206
55°	2979	3037	3015
60°	2786	2814	2763
65°	2484	2548	2466
70°	2131	2138	2079
75°	1687	1684	1619
80°	1131	1099	1057
85°	614	608	568

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°

Vertical Angle: 45°

Luminance: 3434 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.2	3.7
10°-20°	380.5	10.6
20°-30°	570.0	15.8
30°-40°	675.6	18.8
40°-50°	676.9	18.8
50°-60°	574.5	16.0
60°-70°	387.4	10.8
70°-80°	170.2	4.7
80°-90°	27.7	0.8
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°	1084.8	30.2
0°-40°	1760.4	48.9
0°-60°	3011.8	83.7
0°-90°	3597.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3597.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1427	1427	1427	1427	1427	
5°	1417	1414	1418	1413	1448	134
15°	1357	1341	1349	1356	1357	378
25°	1213	1220	1240	1256	1253	561
35°	1056	1059	1084	1109	1108	656
45°	850	865	880	902	881	657
55°	635	631	647	643	643	565
65°	390	385	400	385	387	388
75°	162	159	162	151	156	174
85°	20	19	20	19	18	29
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1427.2	1427.2	1427.2	1427.2	1427.2
2.5°	1439.5	1428.7	1418.5	1430.3	1437.5
5°	1417.1	1413.7	1417.6	1413.4	1447.5
7.5°	1387.9	1400.7	1408.0	1403.4	1405.5
10°	1372.5	1368.0	1384.4	1395.9	1394.2
12.5°	1355.9	1362.5	1363.4	1375.8	1376.9
15°	1356.8	1341.1	1349.4	1356.4	1357.0
17.5°	1304.1	1321.1	1326.8	1342.8	1322.9
20°	1297.7	1285.3	1297.7	1314.1	1311.5
22.5°	1258.0	1244.2	1270.8	1285.3	1284.4
25°	1213.1	1219.7	1239.6	1255.8	1253.2
27.5°	1173.6	1181.4	1209.8	1232.1	1217.7
30°	1143.2	1139.4	1163.3	1183.2	1194.3
32.5°	1088.9	1102.9	1130.9	1150.6	1140.1
35°	1055.9	1059.0	1083.5	1108.6	1107.9
37.5°	998.2	1012.8	1047.2	1054.2	1047.8
40°	949.0	963.6	994.7	1002.3	999.1
42.5°	912.7	915.3	942.0	950.7	936.8
45°	849.5	865.3	879.7	902.4	881.0
47.5°	795.7	803.1	834.0	840.1	828.9
50°	746.9	749.4	780.6	773.0	765.7
52.5°	685.5	696.4	713.9	712.4	703.7
55°	635.0	630.8	647.4	642.9	642.7
57.5°	574.4	581.8	595.4	588.4	577.1
60°	517.6	517.8	522.8	514.9	513.4
62.5°	454.4	456.6	457.7	448.0	463.8
65°	390.1	384.9	400.1	384.8	387.3
67.5°	331.0	333.5	332.1	322.5	326.2
70°	270.9	274.2	271.8	260.9	264.2
72.5°	216.0	211.9	214.5	200.9	207.1
75°	162.3	159.0	162.0	150.6	155.7
77.5°	110.6	113.1	111.3	105.2	108.7
80°	73.0	70.9	70.9	67.4	68.2
82.5°	42.6	40.5	40.0	38.9	40.5
85°	19.9	19.3	19.7	19.2	18.4
87.5°	7.2	7.4	7.4	7.0	6.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)