

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: P560675

Luminaire Tested: FSR-12-2-LD4-2STD-40-UNV-93-85-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560675
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-93-85-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR PC ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3026.0 lumens
Efficiency: N/A
Efficacy: 90.9 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

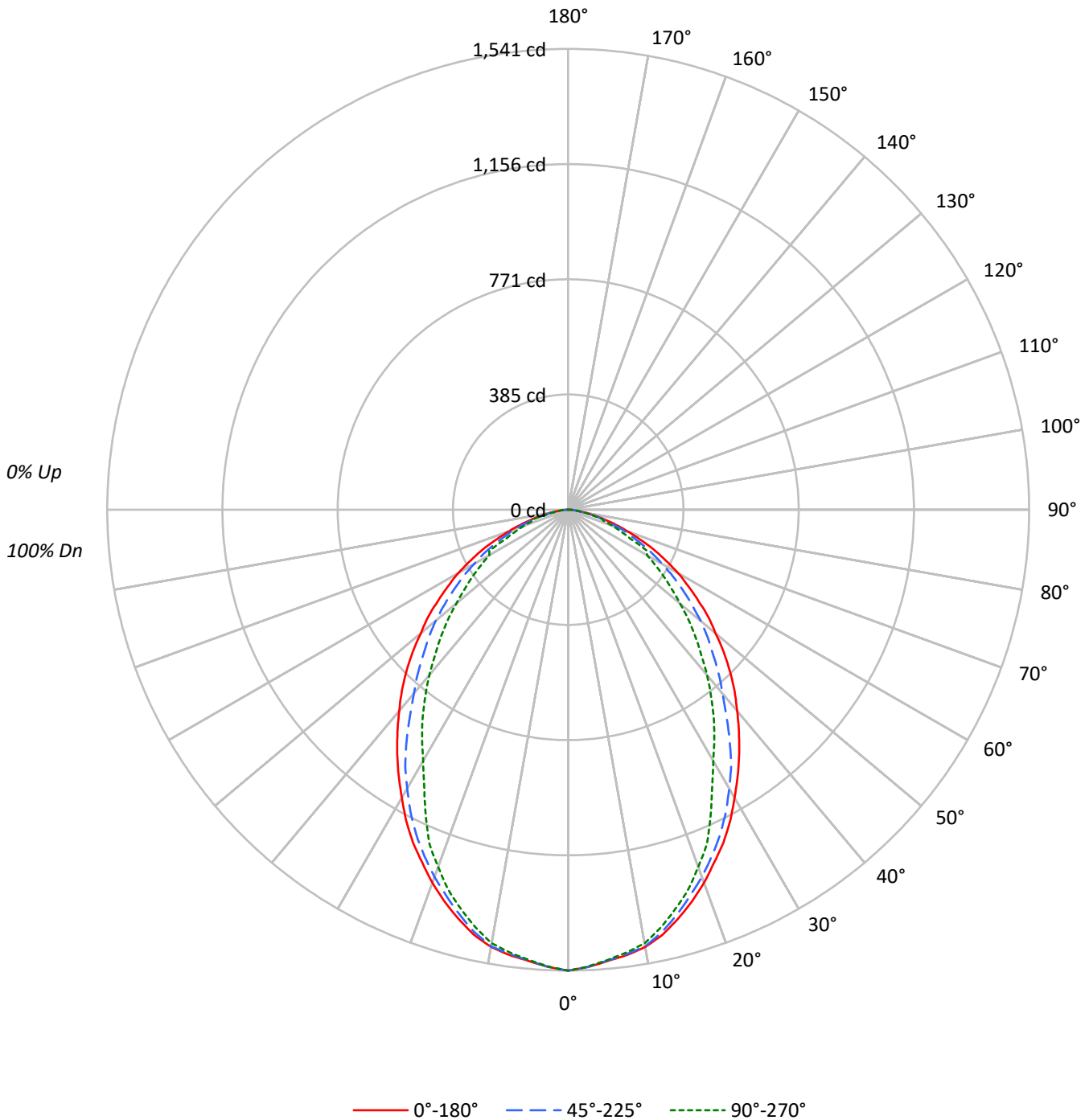
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	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°	8296	8296	8296
5°	8183	8173	8164
10°	8112	8102	8044
15°	7894	7814	7705
20°	7604	7481	7277
25°	7291	7132	6688
30°	6910	6689	6024
35°	6545	6182	5573
40°	6172	5634	5070
45°	5819	5208	4584
50°	5386	4834	4088
55°	4982	4381	3662
60°	4565	3913	3280
65°	4017	3427	2905
70°	3309	3001	2467
75°	2630	2298	2408
80°	1767	1658	1547
85°	1099	1321	1538

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5819 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.5	4.7
10°-20°	393.8	13.0
20°-30°	545.2	18.0
30°-40°	581.3	19.2
40°-50°	530.3	17.5
50°-60°	415.5	13.7
60°-70°	270.8	8.9
70°-80°	120.0	4.0
80°-90°	25.8	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°	1082.4	35.8
0°-40°	1663.7	55.0
0°-60°	2609.5	86.2
0°-90°	3026.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3026.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1541	1541	1541	1541	1541	
5°	1515	1513	1513	1511	1511	144
15°	1417	1417	1402	1388	1383	398
25°	1228	1221	1201	1158	1126	564
35°	996	989	941	870	848	623
45°	764	748	684	627	602	589
55°	531	515	467	412	390	476
65°	315	298	269	274	228	311
75°	126	118	110	105	116	136
85°	18	20	21	23	25	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1541.4	1541.4	1541.4	1541.4	1541.4
2.5°	1530.7	1530.7	1530.7	1528.9	1528.9
5°	1514.7	1512.9	1512.9	1511.1	1511.1
7.5°	1502.2	1500.4	1498.6	1496.9	1493.3
10°	1484.4	1484.4	1482.6	1473.7	1471.9
12.5°	1455.9	1454.1	1447.0	1434.5	1430.9
15°	1416.7	1416.7	1402.4	1388.2	1382.8
17.5°	1373.9	1372.1	1354.3	1340.0	1332.9
20°	1327.6	1324.0	1306.2	1283.0	1270.5
22.5°	1275.9	1275.9	1254.5	1224.2	1211.7
25°	1227.8	1220.6	1201.0	1158.3	1126.2
27.5°	1172.5	1161.8	1140.5	1079.9	1042.5
30°	1111.9	1106.6	1076.3	997.9	969.4
32.5°	1054.9	1046.0	1013.9	932.0	908.8
35°	996.1	989.0	940.9	869.6	848.2
37.5°	937.3	928.4	867.8	810.8	784.1
40°	878.5	867.8	801.9	750.2	721.7
42.5°	823.3	809.0	744.9	689.6	657.5
45°	764.5	748.4	684.3	627.3	602.3
47.5°	705.7	691.4	632.6	573.8	545.3
50°	643.3	630.8	577.4	518.6	488.3
52.5°	591.6	572.0	520.3	461.5	436.6
55°	531.0	515.0	466.9	411.6	390.3
57.5°	475.8	459.7	415.2	363.5	345.7
60°	424.1	400.9	363.5	319.0	304.7
62.5°	367.1	349.3	317.2	279.8	297.6
65°	315.4	297.6	269.1	274.4	228.1
67.5°	258.4	249.5	224.5	199.6	192.5
70°	210.3	199.6	190.7	163.9	156.8
72.5°	167.5	156.8	144.3	130.1	124.7
75°	126.5	117.6	110.5	105.1	115.8
77.5°	87.3	83.8	78.4	73.1	71.3
80°	57.0	55.2	53.5	51.7	49.9
82.5°	33.9	33.9	33.9	33.9	33.9
85°	17.8	19.6	21.4	23.2	24.9
87.5°	10.7	10.7	12.5	14.3	16.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)