

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: P560747

Luminaire Tested: FSR-12-2-LD4-2STD-50-UNV-93-94-EDD

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560747
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-50-UNV-93-94-EDD
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 80 CRI AND 5000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3147.0 lumens
Efficiency: N/A
Efficacy: 94.5 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

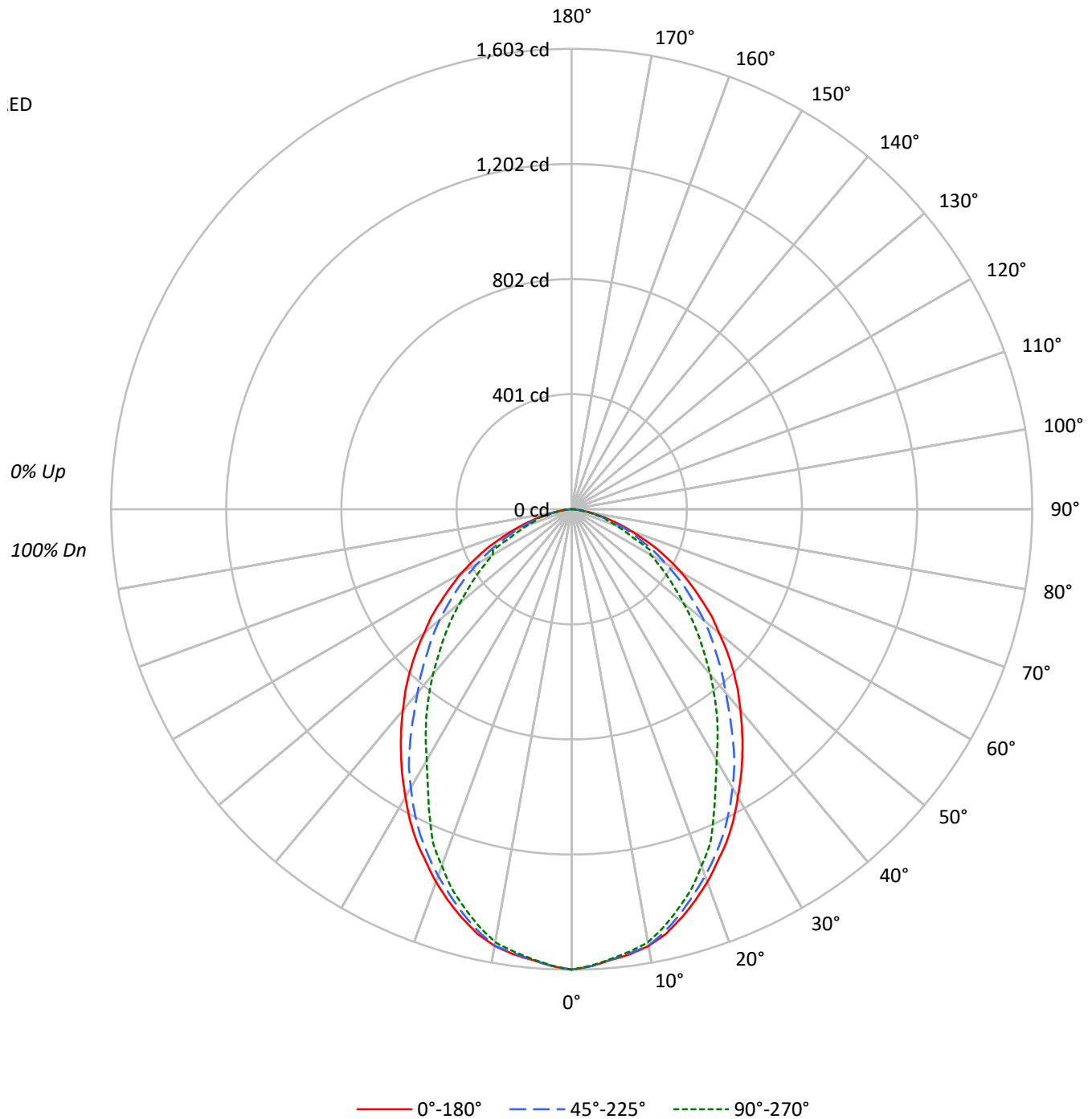
Input Watts (W): 33.3
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	100	100	100	100	100		
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87	87	87	87	87	87	87		
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75	75	75	75	75	75	75		
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65	65	65	65	65	65	65		
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56	56	56	56	56	56	56		
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50	50	50	50	50	50	50		
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44	44	44	44	44	44	44		
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40	40	40	40	40	40	40		
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36	36	36	36	36	36	36		
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33	33	33	33	33	33	33		
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30	30	30	30	30	30	30		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8627	8627	8627
5°	8510	8500	8490
10°	8436	8426	8366
15°	8209	8126	8013
20°	7908	7780	7568
25°	7583	7418	6955
30°	7187	6956	6266
35°	6807	6429	5796
40°	6419	5859	5273
45°	6051	5416	4768
50°	5601	5027	4252
55°	5182	4556	3809
60°	4748	4070	3411
65°	4177	3563	3021
70°	3441	3120	2567
75°	2737	2389	2506
80°	1838	1723	1609
85°	1142	1371	1599

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6051 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.2	4.7
10°-20°	409.5	13.0
20°-30°	567.0	18.0
30°-40°	604.5	19.2
40°-50°	551.5	17.5
50°-60°	432.1	13.7
60°-70°	281.6	8.9
70°-80°	124.8	4.0
80°-90°	26.8	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°	1125.7	35.8
0°-40°	1730.2	55.0
0°-60°	2713.8	86.2
0°-90°	3147.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3147.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1603	1603	1603	1603	1603	
5°	1575	1573	1573	1572	1572	150
15°	1473	1473	1458	1444	1438	414
25°	1277	1270	1249	1205	1171	586
35°	1036	1028	978	904	882	648
45°	795	778	712	652	626	612
55°	552	536	486	428	406	495
65°	328	310	280	285	237	323
75°	132	122	115	109	120	141
85°	18	20	22	24	26	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1603.0	1603.0	1603.0	1603.0	1603.0
2.5°	1591.9	1591.9	1591.9	1590.1	1590.1
5°	1575.2	1573.4	1573.4	1571.5	1571.5
7.5°	1562.3	1560.4	1558.6	1556.7	1553.0
10°	1543.7	1543.7	1541.9	1532.6	1530.8
12.5°	1514.1	1512.2	1504.8	1491.8	1488.1
15°	1473.3	1473.3	1458.5	1443.7	1438.1
17.5°	1428.8	1427.0	1408.5	1393.6	1386.2
20°	1380.7	1376.9	1358.4	1334.3	1321.3
22.5°	1326.9	1326.9	1304.7	1273.2	1260.2
25°	1276.9	1269.5	1249.1	1204.6	1171.2
27.5°	1219.4	1208.3	1186.1	1123.1	1084.1
30°	1156.4	1150.9	1119.3	1037.8	1008.2
32.5°	1097.1	1087.8	1054.5	969.2	945.1
35°	1036.0	1028.5	978.5	904.4	882.1
37.5°	974.8	965.5	902.5	843.2	815.4
40°	913.6	902.5	834.0	780.2	750.6
42.5°	856.2	841.4	774.6	717.2	683.8
45°	795.0	778.4	711.6	652.3	626.4
47.5°	733.9	719.1	657.9	596.7	567.1
50°	669.0	656.0	600.4	539.3	507.8
52.5°	615.3	594.9	541.1	480.0	454.0
55°	552.3	535.6	485.5	428.1	405.9
57.5°	494.8	478.1	431.8	378.1	359.5
60°	441.1	417.0	378.1	331.7	316.9
62.5°	381.8	363.2	329.9	291.0	309.5
65°	328.0	309.5	279.8	285.4	237.2
67.5°	268.7	259.5	233.5	207.6	200.1
70°	218.7	207.6	198.3	170.5	163.1
72.5°	174.2	163.1	150.1	135.3	129.7
75°	131.6	122.3	114.9	109.3	120.5
77.5°	90.8	87.1	81.5	76.0	74.1
80°	59.3	57.4	55.6	53.7	51.9
82.5°	35.2	35.2	35.2	35.2	35.2
85°	18.5	20.4	22.2	24.1	25.9
87.5°	11.1	11.1	13.0	14.8	16.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)