

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: P560298

Luminaire Tested: FSR-12-2-LD4-2HI-40-UNV-93-94-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P560298
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-LD4-2HI-40-UNV-93-94-EDD-90
Description: 1X2 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .187 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 4000K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3189.0 lumens
Efficiency: N/A
Efficacy: 73.8 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

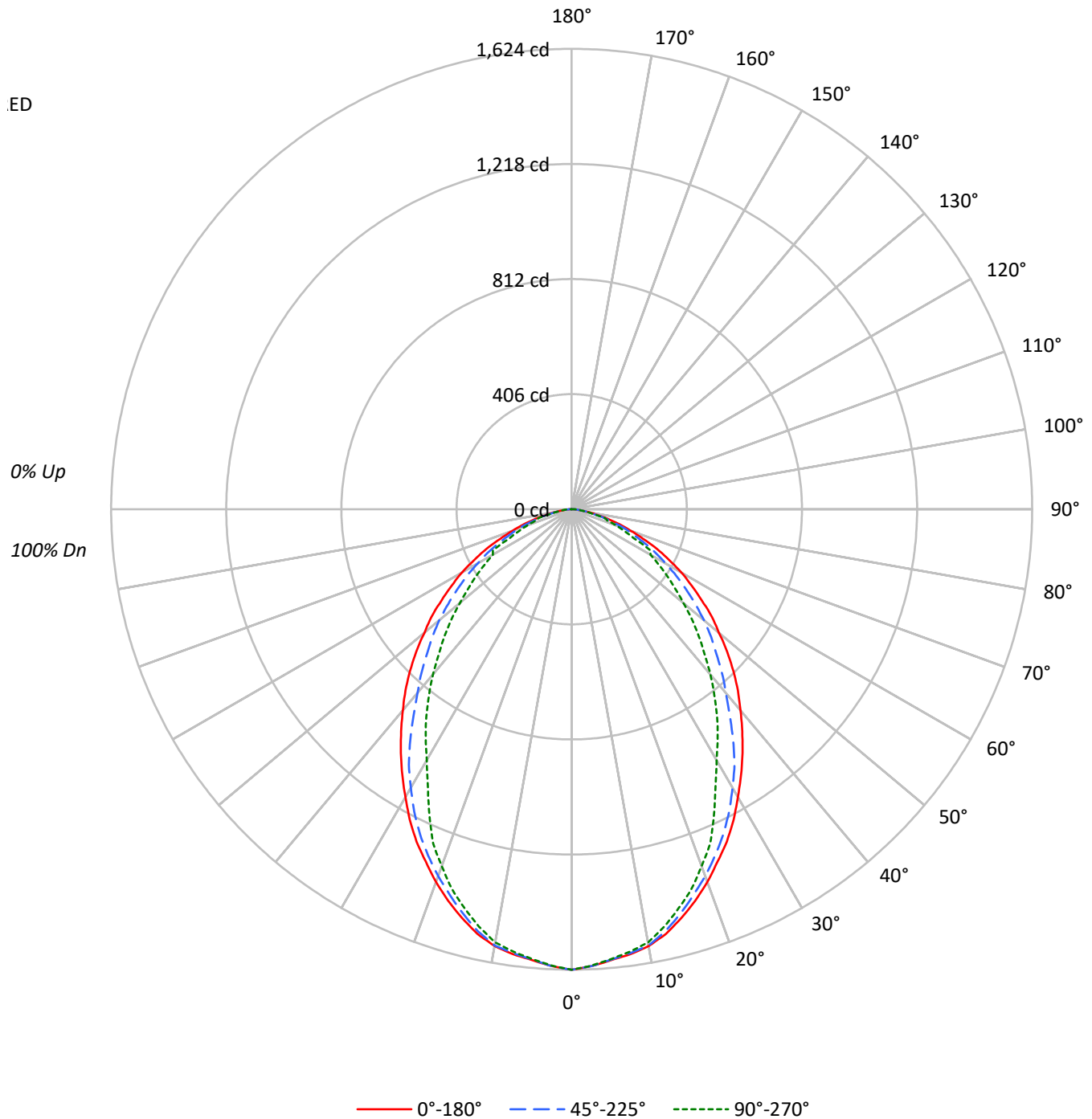
Input Watts (W): 43.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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	0																			
RCR																																														
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																												
1	110	106	102	99	108	104	100	97	100	97	94	96	94	91	92	90	89	87																												
2	101	94	88	83	99	92	87	82	89	84	80	86	82	78	83	79	77	75																												
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	65																												
4	86	75	67	61	84	74	66	61	72	65	60	69	64	59	67	62	58	56																												
5	80	68	60	54	78	67	59	53	65	58	53	63	57	52	61	56	52	50																												
6	74	62	53	48	72	61	53	47	59	52	47	57	51	47	56	50	46	44																												
7	69	56	48	43	67	56	48	42	54	47	42	53	46	42	51	46	42	40																												
8	65	52	44	38	63	51	44	38	50	43	38	49	42	38	48	42	38	36																												
9	61	48	40	35	59	47	40	35	46	39	35	45	39	34	44	38	34	33																												
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	36	32	30																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8742	8742	8742
5°	8624	8614	8604
10°	8549	8539	8477
15°	8319	8235	8120
20°	8013	7884	7669
25°	7684	7516	7048
30°	7282	7049	6349
35°	6897	6515	5873
40°	6504	5937	5344
45°	6132	5488	4831
50°	5676	5095	4309
55°	5251	4617	3859
60°	4811	4124	3456
65°	4233	3612	3061
70°	3487	3161	2601
75°	2772	2420	2539
80°	1863	1745	1630
85°	1161	1389	1624

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6132 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.2	4.7
10°-20°	415.0	13.0
20°-30°	574.5	18.0
30°-40°	612.6	19.2
40°-50°	558.9	17.5
50°-60°	437.8	13.7
60°-70°	285.4	8.9
70°-80°	126.4	4.0
80°-90°	27.1	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°	1140.7	35.8
0°-40°	1753.4	55.0
0°-60°	2750.1	86.2
0°-90°	3189.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3189.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1624	1624	1624	1624	1624	
5°	1596	1594	1594	1592	1592	152
15°	1493	1493	1478	1463	1457	420
25°	1294	1286	1266	1221	1187	594
35°	1050	1042	992	916	894	656
45°	806	789	721	661	635	621
55°	560	543	492	434	411	502
65°	332	314	284	289	240	328
75°	133	124	116	111	122	143
85°	19	21	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°	1624.4	1624.4	1624.4	1624.4	1624.4
2.5°	1613.2	1613.2	1613.2	1611.3	1611.3
5°	1596.3	1594.4	1594.4	1592.5	1592.5
7.5°	1583.1	1581.2	1579.4	1577.5	1573.7
10°	1564.3	1564.3	1562.5	1553.1	1551.2
12.5°	1534.3	1532.4	1524.9	1511.8	1508.0
15°	1493.0	1493.0	1478.0	1462.9	1457.3
17.5°	1447.9	1446.0	1427.2	1412.2	1404.7
20°	1399.1	1395.3	1376.5	1352.1	1339.0
22.5°	1344.6	1344.6	1322.1	1290.2	1277.0
25°	1293.9	1286.4	1265.7	1220.7	1186.9
27.5°	1235.7	1224.4	1201.9	1138.0	1098.6
30°	1171.8	1166.2	1134.3	1051.7	1021.6
32.5°	1111.8	1102.4	1068.6	982.2	957.8
35°	1049.8	1042.3	991.6	916.4	893.9
37.5°	987.8	978.4	914.6	854.5	826.3
40°	925.8	914.6	845.1	790.6	760.6
42.5°	867.6	852.6	785.0	726.8	693.0
45°	805.6	788.7	721.1	661.0	634.7
47.5°	743.7	728.6	666.7	604.7	574.7
50°	677.9	664.8	608.5	546.5	514.6
52.5°	623.5	602.8	548.4	486.4	460.1
55°	559.6	542.7	492.0	433.8	411.3
57.5°	501.4	484.5	437.6	383.1	364.3
60°	447.0	422.5	383.1	336.2	321.1
62.5°	386.9	368.1	334.3	294.8	313.6
65°	332.4	313.6	283.6	289.2	240.4
67.5°	272.3	262.9	236.6	210.3	202.8
70°	221.6	210.3	200.9	172.8	165.3
72.5°	176.5	165.3	152.1	137.1	131.5
75°	133.3	123.9	116.4	110.8	122.1
77.5°	92.0	88.3	82.6	77.0	75.1
80°	60.1	58.2	56.3	54.5	52.6
82.5°	35.7	35.7	35.7	35.7	35.7
85°	18.8	20.7	22.5	24.4	26.3
87.5°	11.3	11.3	13.1	15.0	16.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)