

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: P561966

Luminaire Tested: FSR-24-2-LD4-1LO-35-UNV-93-97-EDD-90

Issue Date: 7/20/2021

Test Information

Test Method: LM-79-2019
Report Number: P561966
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-24-2-LD4-1LO-35-UNV-93-97-EDD-90
Description: 2X4 FSR TROFFER WITH .156 CLEAR TEMPERED GLASS FIXTURE SIDE AND .375 CLEAR TEMPER
GLASS ENVIRONMENTAL SIDE LENSES WITH, 90 CRI AND 3500K CCT LEDS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2335.0 lumens
Efficiency: N/A
Efficacy: 99.8 lumens/watt
Spacing Criteria (0/90/45): 1.1 / 1 / 1.15
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

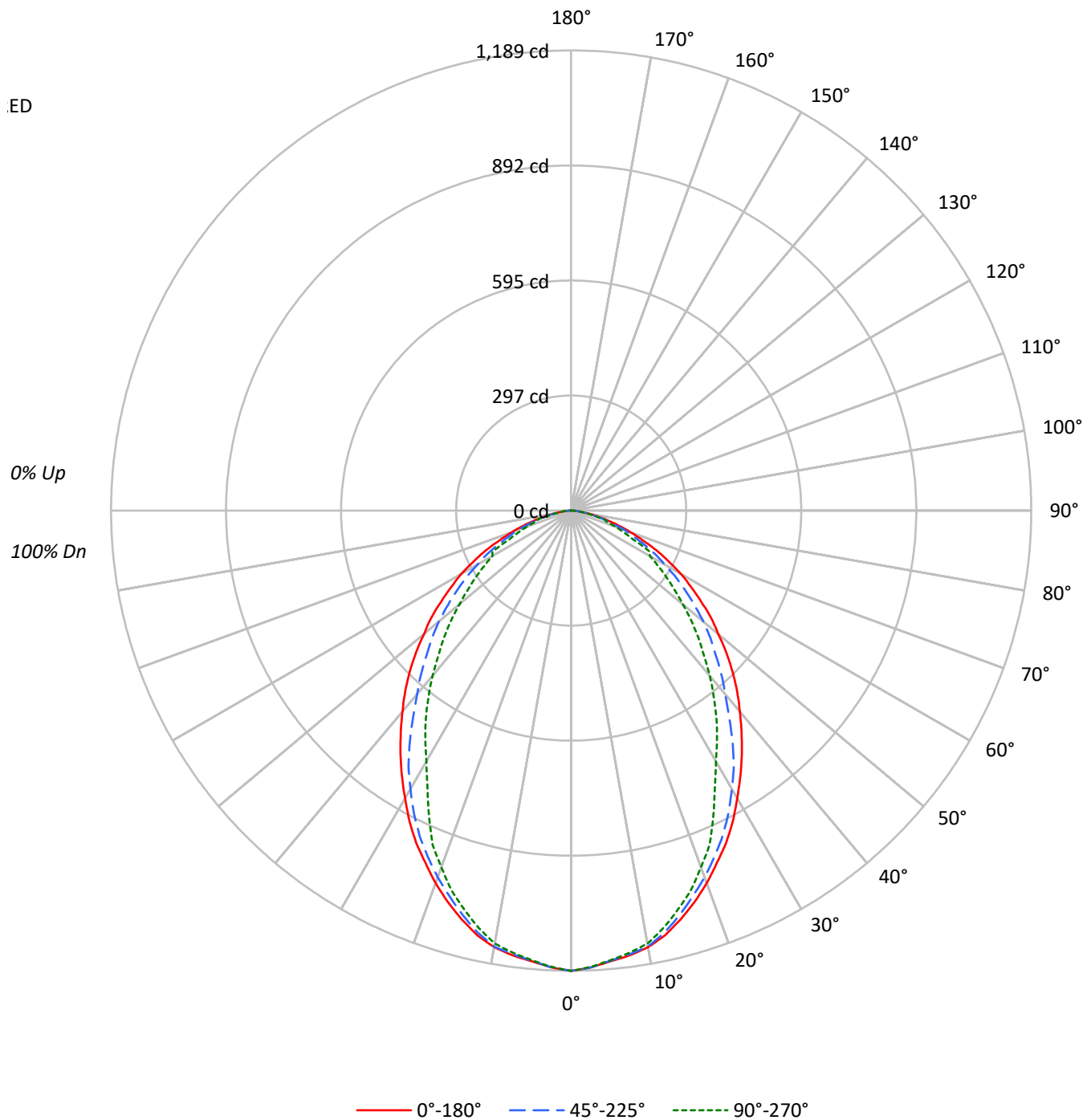
Input Watts (W): 23.4
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	1600	1600	1600
5°	1579	1577	1575
10°	1565	1563	1552
15°	1523	1507	1486
20°	1467	1443	1404
25°	1406	1376	1290
30°	1333	1290	1162
35°	1263	1192	1075
40°	1191	1087	978
45°	1122	1005	884
50°	1039	933	789
55°	961	845	706
60°	881	755	633
65°	775	661	560
70°	638	579	476
75°	507	443	465
80°	341	320	298
85°	213	255	298

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1122 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.7	4.7
10°-20°	303.9	13.0
20°-30°	420.7	18.0
30°-40°	448.6	19.2
40°-50°	409.2	17.5
50°-60°	320.6	13.7
60°-70°	208.9	8.9
70°-80°	92.6	4.0
80°-90°	19.9	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°	835.2	35.8
0°-40°	1283.8	55.0
0°-60°	2013.6	86.2
0°-90°	2335.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2335.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1189	1189	1189	1189	1189	
5°	1169	1167	1167	1166	1166	111
15°	1093	1093	1082	1071	1067	307
25°	947	942	927	894	869	435
35°	769	763	726	671	654	481
45°	590	578	528	484	465	454
55°	410	397	360	318	301	368
65°	243	230	208	212	176	240
75°	98	91	85	81	89	105
85°	14	15	16	18	19	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1189.4	1189.4	1189.4	1189.4	1189.4
2.5°	1181.2	1181.2	1181.2	1179.8	1179.8
5°	1168.8	1167.4	1167.4	1166.0	1166.0
7.5°	1159.2	1157.8	1156.4	1155.0	1152.3
10°	1145.4	1145.4	1144.0	1137.2	1135.8
12.5°	1123.4	1122.0	1116.5	1106.9	1104.2
15°	1093.2	1093.2	1082.2	1071.2	1067.0
17.5°	1060.2	1058.8	1045.0	1034.0	1028.5
20°	1024.4	1021.7	1007.9	990.0	980.4
22.5°	984.5	984.5	968.0	944.7	935.0
25°	947.4	941.9	926.8	893.8	869.0
27.5°	904.8	896.5	880.0	833.3	804.4
30°	858.0	853.9	830.5	770.0	748.0
32.5°	814.0	807.2	782.4	719.2	701.3
35°	768.7	763.2	726.0	671.0	654.5
37.5°	723.3	716.4	669.6	625.6	605.0
40°	677.9	669.6	618.8	578.9	556.9
42.5°	635.3	624.3	574.8	532.1	507.4
45°	589.9	577.5	528.0	484.0	464.8
47.5°	544.5	533.5	488.1	442.8	420.8
50°	496.4	486.8	445.5	400.1	376.8
52.5°	456.5	441.4	401.5	356.1	336.9
55°	409.8	397.4	360.3	317.6	301.1
57.5°	367.1	354.8	320.4	280.5	266.8
60°	327.3	309.4	280.5	246.1	235.1
62.5°	283.3	269.5	244.8	215.9	229.6
65°	243.4	229.6	207.6	211.8	176.0
67.5°	199.4	192.5	173.3	154.0	148.5
70°	162.3	154.0	147.1	126.5	121.0
72.5°	129.3	121.0	111.4	100.4	96.3
75°	97.6	90.8	85.3	81.1	89.4
77.5°	67.4	64.6	60.5	56.4	55.0
80°	44.0	42.6	41.3	39.9	38.5
82.5°	26.1	26.1	26.1	26.1	26.1
85°	13.8	15.1	16.5	17.9	19.3
87.5°	8.3	8.3	9.6	11.0	12.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)