

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: METALUX

Report Number: P31279

Luminaire Tested: **ALN-232-UNV-EB81-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P31279  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: ALN-232-UNV-EB81-U  
Description: METALUX 1X4 ARCLINE LFL FIXTURE WITH LENS  
Light Source: (2) BIPIN T8 DOUBLE ENDED 32W LINEAR FLUORESCENT LAMP 3500K, 3100 EA  
Ballast/Driver: -  
QTP2X32T8/UNV ISN SC

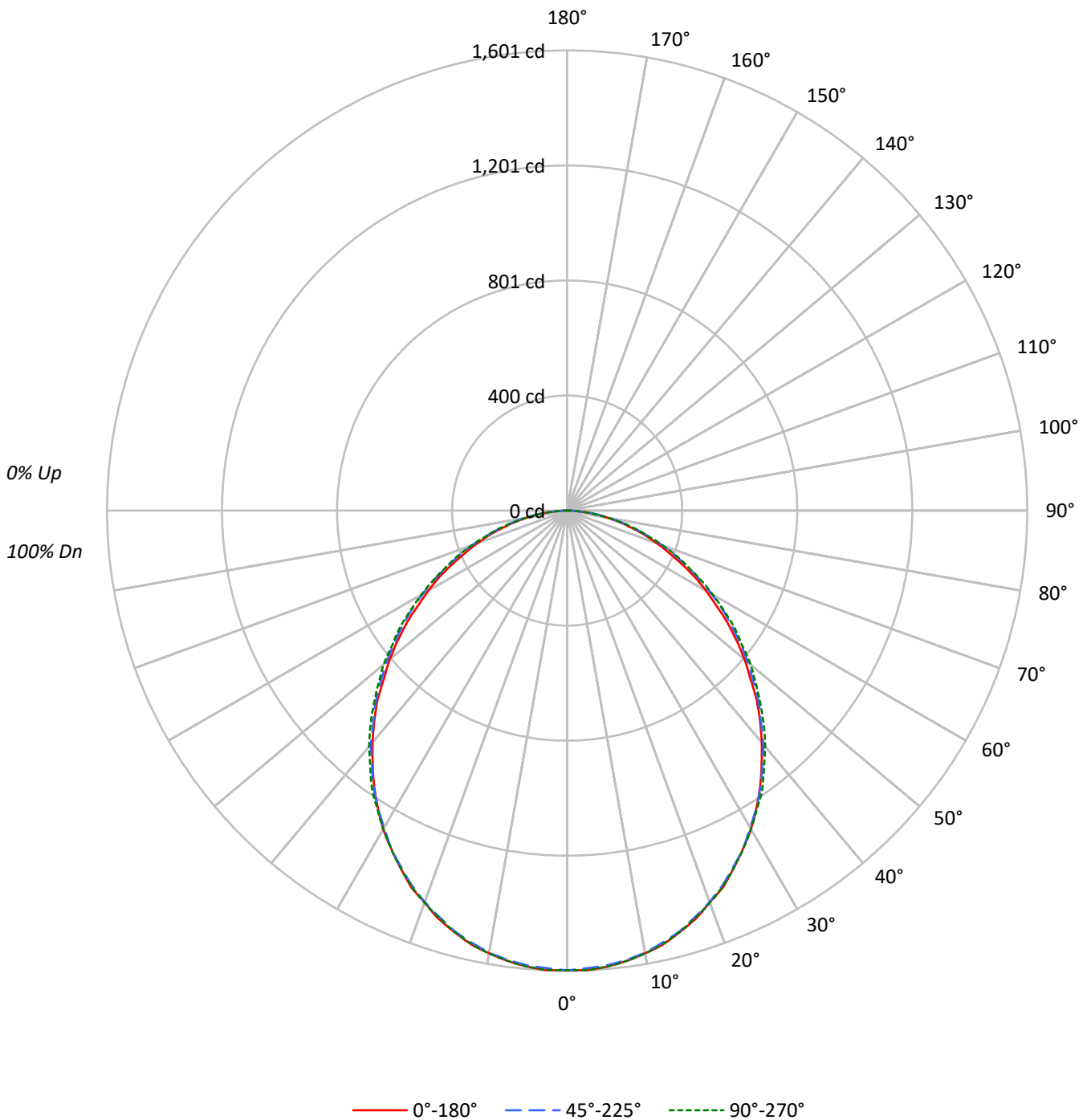
**Summary**

Lumens per Lamp: 3100 (2 lamps)  
Luminaire Lumens: 4079.1 lumens  
Efficiency: 65.8%  
Efficacy: 73.5 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3  
Luminous Opening: Rectangular (W 0.77' x L: 3.77' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 55.5  
Input Voltage (V): NR  
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: 25 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	0
RCR																				
0	78	78	78	78	77	77	77	77	73	73	73		70	70	70		67	67	67	66
1	72	69	66	63	70	67	65	62	64	62	60		62	60	59		59	58	57	55
2	65	60	56	52	64	59	55	51	57	53	50		54	52	49		52	50	48	47
3	60	53	48	44	58	52	47	43	50	46	42		48	45	42		47	44	41	40
4	55	47	41	37	53	46	41	37	45	40	36		43	39	36		42	38	35	34
5	51	42	36	32	49	41	36	32	40	35	32		39	35	31		38	34	31	30
6	47	38	32	28	45	37	32	28	36	31	28		35	31	28		34	30	27	26
7	43	35	29	25	42	34	29	25	33	28	25		32	28	25		31	27	24	23
8	40	32	26	22	39	31	26	22	30	26	22		30	25	22		29	25	22	21
9	38	29	24	20	37	29	24	20	28	23	20		27	23	20		27	23	20	19
10	36	27	22	18	35	27	22	18	26	21	18		25	21	18		25	21	18	17

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5921	5921	5921
5°	5922	5903	5922
10°	5881	5874	5885
15°	5820	5808	5816
20°	5718	5710	5722
25°	5606	5590	5606
30°	5473	5443	5469
35°	5294	5303	5353
40°	5090	5134	5182
45°	4886	4933	4980
50°	4643	4724	4805
55°	4397	4513	4590
60°	4133	4296	4340
65°	3847	4031	4066
70°	3595	3779	3822
75°	3334	3520	3563
80°	2986	3220	3156
85°	2719	2677	2507



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	151.1	3.7	2.4	0°	1599	1599	1599	1599	1599	
10°-20°	427.5	10.5	6.9	5°	1593	1595	1588	1592	1593	151
20°-30°	631.7	15.5	10.2	15°	1518	1521	1515	1516	1517	428
30°-40°	734.2	18.0	11.8	25°	1372	1376	1368	1372	1372	632
40°-50°	726.0	17.8	11.7	35°	1171	1173	1173	1178	1184	731
50°-60°	623.3	15.3	10.1	45°	933	935	942	949	951	717
60°-70°	454.1	11.1	7.3	55°	681	687	699	709	711	608
70°-80°	258.0	6.3	4.2	65°	439	449	460	466	464	437
80°-90°	73.3	1.8	1.2	75°	233	238	246	248	249	247
90°-100°	0.0	0.0	0.0	85°	64	66	63	61	59	72
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	
110°-120°	0.0	0.0	0.0							
120°-130°	0.0	0.0	0.0							
130°-140°	0.0	0.0	0.0							
140°-150°	0.0	0.0	0.0							
150°-160°	0.0	0.0	0.0							
160°-170°	0.0	0.0	0.0							
170°-180°	0.0	0.0	0.0							
0°-30°	1210.2	29.7	19.5							
0°-40°	1944.5	47.7	31.4							
0°-60°	3293.8	80.7	53.1							
0°-90°	4079.1	100.0	65.8							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	4079.1	100.0	65.8							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1599	1599	1599	1599	1599
2.5°	1601	1602	1594	1599	1600
5°	1593	1595	1588	1592	1593
7.5°	1581	1584	1577	1580	1581
10°	1564	1569	1562	1563	1565
12.5°	1546	1546	1539	1542	1544
15°	1518	1521	1515	1516	1517
17.5°	1489	1489	1482	1488	1485
20°	1451	1457	1449	1450	1452
22.5°	1418	1419	1412	1414	1415
25°	1372	1376	1368	1372	1372
27.5°	1326	1328	1326	1327	1327
30°	1280	1280	1273	1281	1279
32.5°	1226	1228	1226	1231	1230
35°	1171	1173	1173	1178	1184
37.5°	1111	1116	1115	1125	1125
40°	1053	1054	1062	1068	1072
42.5°	993	994	998	1007	1013
45°	933	935	942	949	951
47.5°	864	872	879	891	890
50°	806	810	820	830	834
52.5°	743	749	758	769	766
55°	681	687	699	709	711
57.5°	615	627	641	643	646
60°	558	566	580	584	586
62.5°	501	507	521	524	525
65°	439	449	460	466	464
67.5°	383	397	406	406	413
70°	332	341	349	353	353
72.5°	283	287	297	299	297
75°	233	238	246	248	249
77.5°	185	191	197	199	197
80°	140	149	151	149	148
82.5°	103	107	108	103	101
85°	64	66	63	61	59
87.5°	28	27	29	27	25
90°	0	0	0	0	0

(END OF REPORT)