

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: 121P114

Luminaire Tested: **WS-332AT**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 121P114
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: WS-332AT
Description: WS Series (Wide Housing) wraparound with
a tinted acrylic lens.
Light Source: Three - FO32T8/35K - 2800 Lumens ea. - 32 Watts ea.
Ballast/Driver: Magnetek B332I120RH Electronic - L.O.B.F. = 88.9

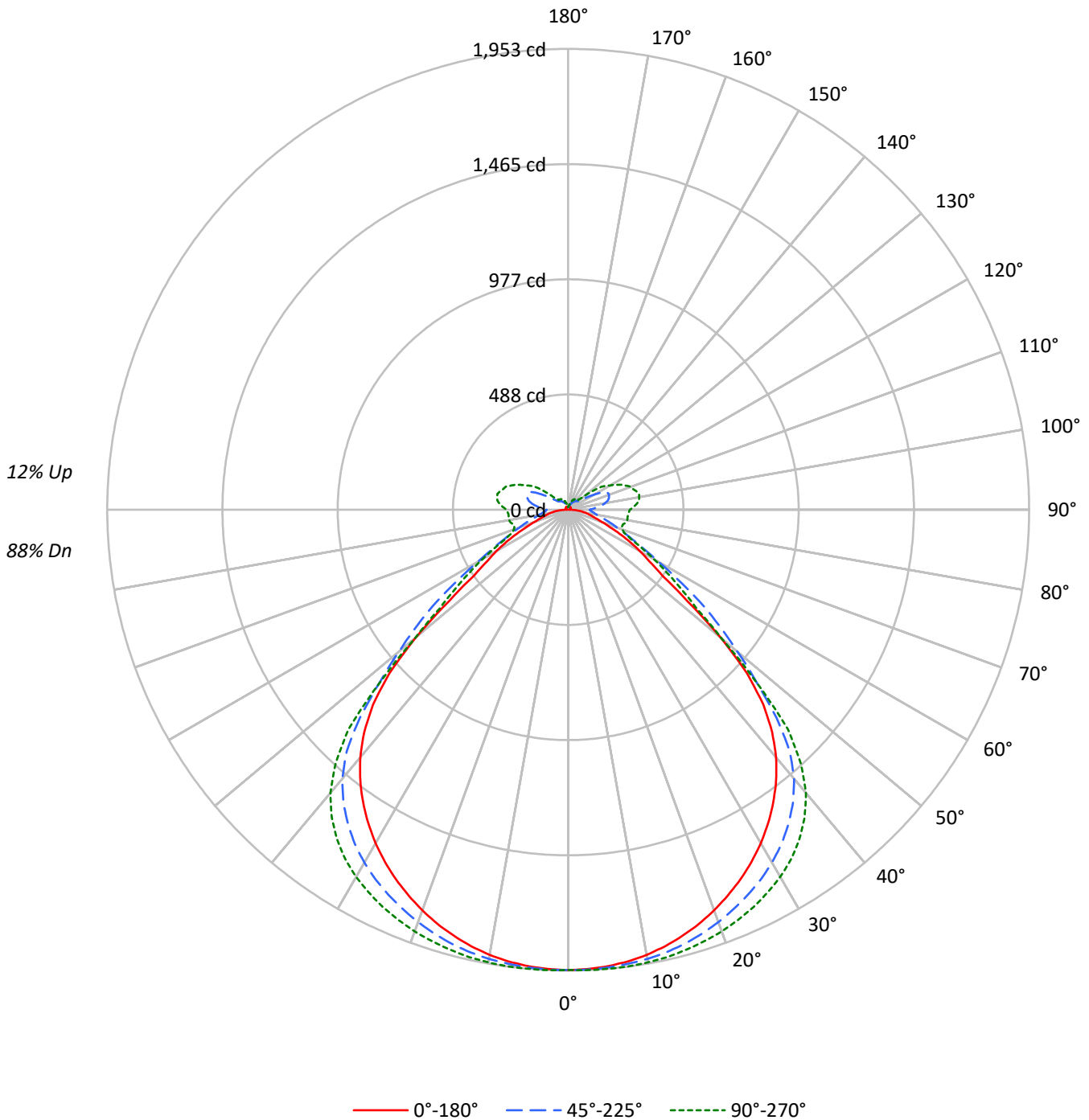
Summary

Lumens per Lamp: 2800 (3 lamps)
Luminaire Lumens: 5306.0 lumens
Efficiency: 63.2%
Efficacy: 62.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.36 / 1.37
Luminous Opening: Rectangular w/ Sides (W: 1.28' x L: 3.98' x H: 0.17')
CIE Type: Semi-Direct

Input Watts (W): 84.6
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

TEST NUMBER: 121P114
CATALOG NUMBER: WS-332AT

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	73	73	73	73	71	71	71	71	66	66	66	62	62	62	58	58	58	56
1	68	65	62	60	65	63	60	58	59	57	55	55	53	52	51	50	49	48
2	62	57	53	50	60	56	52	49	52	49	47	49	47	45	46	44	43	41
3	57	51	46	43	55	50	45	42	47	43	40	44	41	39	42	39	37	36
4	53	46	41	37	51	44	40	36	42	38	35	40	36	34	38	35	33	31
5	49	41	36	32	47	40	35	32	38	34	31	36	32	30	34	31	29	27
6	45	37	32	28	43	36	32	28	35	30	27	33	29	26	31	28	26	24
7	42	34	29	25	40	33	28	25	32	27	24	30	26	24	29	25	23	22
8	39	31	26	23	38	30	26	22	29	25	22	28	24	21	26	23	21	19
9	37	29	24	20	35	28	23	20	27	23	20	26	22	19	24	21	19	18
10	34	26	22	19	33	26	21	18	25	21	18	24	20	18	23	19	17	16

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4119	4119	4119
5°	4101	4083	4092
10°	4077	4057	4082
15°	4042	4032	4078
20°	3999	4002	4080
25°	3948	3970	4081
30°	3884	3934	4075
35°	3793	3864	4032
40°	3647	3724	3894
45°	3350	3322	3477
50°	2637	2685	2411
55°	1695	2136	1807
60°	1378	1545	1444
65°	1095	1201	1144
70°	841	1013	1110
75°	727	909	1318
80°	727	892	1777
85°	639	1034	2464



TEST NUMBER: 121P114
 CATALOG NUMBER: WS-332AT

ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	185.4	3.5	2.2	0°	1951	1951	1951	1951	1951	
10°-20°	537.3	10.1	6.4	5°	1942	1944	1947	1949	1953	185
20°-30°	828.3	15.6	9.9	15°	1870	1881	1905	1922	1931	528
30°-40°	1009.0	19.0	12.0	25°	1728	1752	1801	1841	1858	796
40°-50°	936.9	17.7	11.2	35°	1515	1548	1627	1686	1707	945
50°-60°	557.1	10.5	6.6	45°	1169	1204	1248	1278	1316	882
60°-70°	299.5	5.6	3.6	55°	488	635	681	586	582	473
70°-80°	184.6	3.5	2.2	65°	239	276	303	329	293	241
80°-90°	141.4	2.7	1.7	75°	103	126	162	220	240	113
90°-100°	148.6	2.8	1.8	85°	39	58	102	209	253	39
100°-110°	170.8	3.2	2.0	90°	4	25	91	215	261	4
110°-120°	148.8	2.8	1.8	95°	5	26	125	249	292	4
120°-130°	78.2	1.5	0.9	105°	6	51	178	271	300	7
130°-140°	35.2	0.7	0.4	115°	9	80	178	229	249	9
140°-150°	24.1	0.5	0.3	125°	11	39	80	139	166	10
150°-160°	13.9	0.3	0.2	135°	12	33	52	56	59	9
160°-170°	5.7	0.1	0.1	145°	13	26	41	53	55	8
170°-180°	1.2	0.0	0.0	155°	14	19	30	41	44	7
0°-30°	1551.0	29.2	18.5	165°	13	15	19	24	26	4
0°-40°	2560.0	48.2	30.5	175°	12	12	11	11	13	1
0°-60°	4053.9	76.4	48.3	180°	11	11	11	11	11	
0°-90°	4679.5	88.2	55.7							
90°-120°	468.2	8.8	5.6							
90°-150°	605.7	11.4	7.2							
90°-180°	627.0	11.8	7.5							
0°-180°	5306.0	100.0	63.2							



TEST NUMBER: 121P114
 CATALOG NUMBER: WS-332AT

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1951	1951	1951	1951	1951
2.5°	1948	1950	1951	1950	1953
5°	1942	1944	1947	1949	1953
7.5°	1931	1934	1941	1947	1952
10°	1916	1921	1933	1942	1948
12.5°	1895	1903	1921	1935	1942
15°	1870	1881	1905	1922	1931
17.5°	1841	1856	1884	1906	1918
20°	1807	1826	1860	1889	1902
22.5°	1769	1791	1832	1866	1881
25°	1728	1752	1801	1841	1858
27.5°	1682	1708	1767	1811	1829
30°	1632	1660	1727	1776	1797
32.5°	1576	1607	1681	1734	1757
35°	1515	1548	1627	1686	1707
37.5°	1447	1482	1564	1625	1645
40°	1370	1408	1489	1547	1567
42.5°	1279	1319	1389	1441	1458
45°	1169	1204	1248	1278	1316
47.5°	1028	1054	1082	1076	1081
50°	843	897	936	873	848
52.5°	636	760	806	704	684
55°	488	635	681	586	582
57.5°	408	518	550	504	495
60°	350	416	443	435	419
62.5°	295	336	363	376	348
65°	239	276	303	329	293
67.5°	190	227	257	295	258
70°	152	187	219	267	244
72.5°	123	153	189	241	239
75°	103	126	162	220	240
77.5°	88	105	140	211	250
80°	74	91	124	206	254
82.5°	59	76	112	207	254
85°	39	58	102	209	253
87.5°	19	40	94	211	257
90°	4	25	91	215	261
92.5°	4	26	106	232	278
95°	5	26	125	249	292
97.5°	5	28	143	264	303
100°	5	30	158	269	305
102.5°	6	37	170	272	308
105°	6	51	178	271	300
107.5°	7	66	181	262	289
110°	8	78	184	257	283



TEST NUMBER: 121P114
 CATALOG NUMBER: WS-332AT

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	9	84	183	244	266
115°	9	80	178	229	249
117.5°	9	69	157	210	228
120°	10	57	129	191	206
122.5°	10	46	105	169	188
125°	11	39	80	139	166
127.5°	11	36	63	101	129
130°	11	35	55	73	89
132.5°	12	34	53	59	67
135°	12	33	52	56	59
137.5°	13	31	51	55	58
140°	13	29	48	55	56
142.5°	13	27	45	54	56
145°	13	26	41	53	55
147.5°	14	23	39	50	53
150°	14	22	36	47	50
152.5°	15	20	33	44	47
155°	14	19	30	41	44
157.5°	14	18	27	38	40
160°	14	17	24	34	36
162.5°	14	17	21	29	31
165°	13	15	19	24	26
167.5°	13	14	16	20	21
170°	12	13	14	16	17
172.5°	12	13	13	13	15
175°	12	12	11	11	13
177.5°	12	12	11	10	12
180°	11	11	11	11	11

(END OF REPORT)