

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: NEO-RAY

Report Number: 168P138

Luminaire Tested: **202/240BX**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: 168P138  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: NEO-RAY  
Catalog Number: 202/240BX  
Description: Neo-ray Fenestra Series 202 Luminaire with side  
mounted curved acrylic diffusers and curved perms.  
Light Source: Two - PL-L40W/35/RS - 3150 Lumens ea. - 40 Watts ea.  
Ballast/Driver: Sylvania QT 2X40/120DL Electronic - L.O.B.F. = 96.3

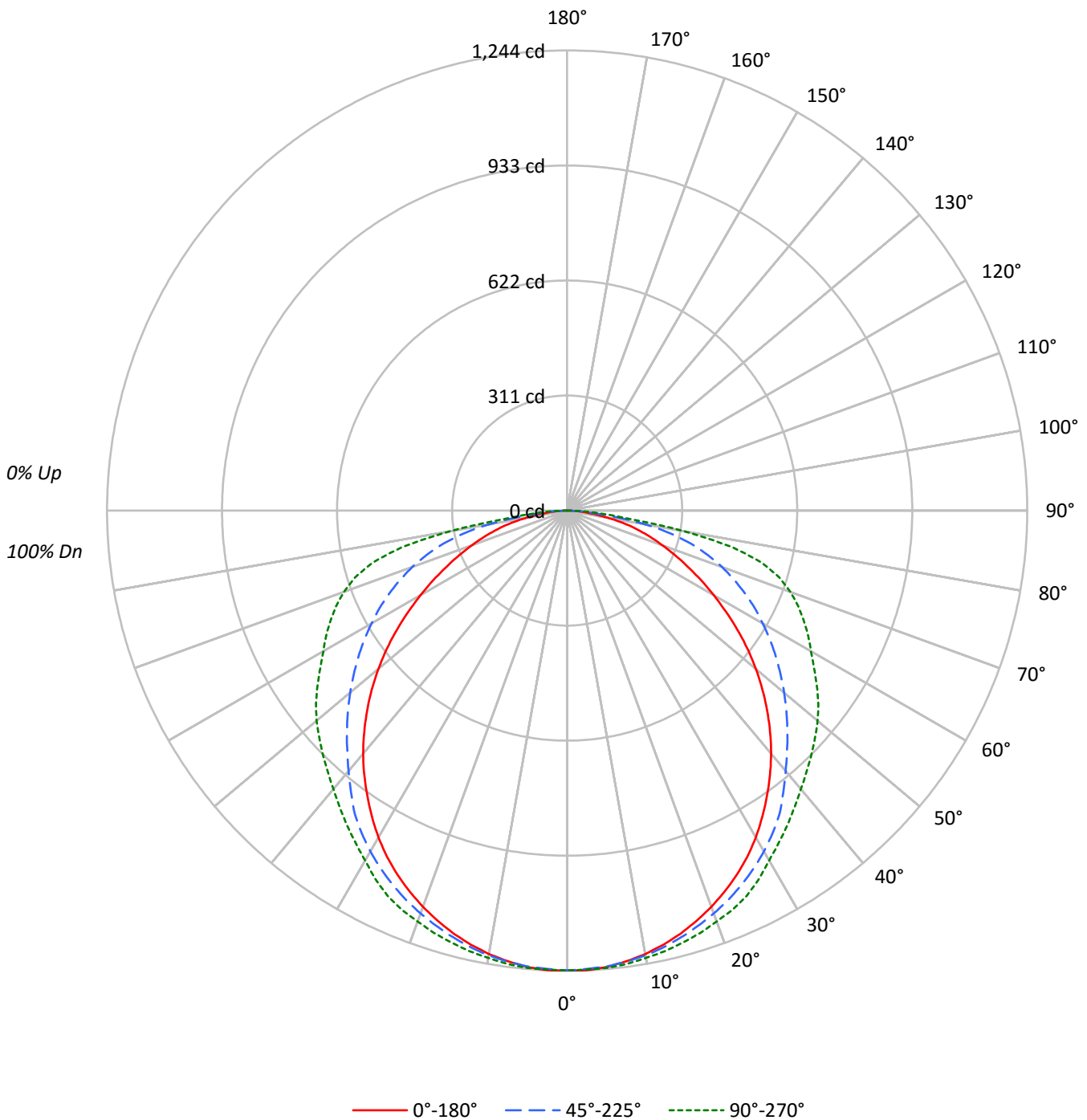
**Summary**

Lumens per Lamp: 3150 (2 lamps)  
Luminaire Lumens: 3845.9 lumens  
Efficiency: 61.0%  
Efficacy: 53.4 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.31 / 1.39  
Luminous Opening: Rectangular (W 1.91' x L: 1.92' x H: 0')  
CIE Type: Direct

Input Watts (W): 72  
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	73	73	73	73	71	71	71	71	68	68	68	65	65	65	62	62	62	61
1	66	63	60	57	64	61	59	56	59	57	55	56	55	53	54	53	51	50
2	60	54	50	46	58	53	49	45	51	47	44	49	46	43	47	45	42	41
3	54	47	42	38	52	46	41	37	44	40	37	43	39	36	41	38	35	34
4	49	42	36	32	48	41	36	32	39	35	31	38	34	31	36	33	30	29
5	45	37	31	27	44	36	31	27	35	30	27	34	30	26	33	29	26	25
6	42	33	28	24	41	33	27	24	32	27	23	31	26	23	30	26	23	22
7	39	30	25	21	38	30	24	21	29	24	21	28	24	20	27	23	20	19
8	36	27	22	18	35	27	22	18	26	22	18	25	21	18	25	21	18	17
9	34	25	20	17	33	25	20	17	24	20	16	23	19	16	23	19	16	15
10	31	23	18	15	31	23	18	15	22	18	15	22	18	15	21	17	15	14

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

	0°	45°	90°
0°	3648	3648	3648
5°	3648	3645	3656
10°	3627	3639	3660
15°	3598	3628	3674
20°	3561	3620	3692
25°	3517	3614	3721
30°	3457	3606	3701
35°	3375	3587	3719
40°	3288	3521	3766
45°	3175	3495	3877
50°	3041	3498	4037
55°	2876	3526	4217
60°	2689	3587	4467
65°	2500	3688	4903
70°	2351	3819	5510
75°	2211	3935	6181
80°	1893	3634	5409
85°	1381	2122	3132



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture	% Lamp
0°-10°	117.6	3.1	1.9
10°-20°	337.5	8.8	5.4
20°-30°	514.4	13.4	8.2
30°-40°	621.5	16.2	9.9
40°-50°	654.8	17.0	10.4
50°-60°	619.9	16.1	9.8
60°-70°	526.0	13.7	8.3
70°-80°	367.2	9.5	5.8
80°-90°	86.9	2.3	1.4
90°-100°	0.0	0.0	0.0
100°-110°	0.0	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°	969.6	25.2	15.4
0°-40°	1591.1	41.4	25.3
0°-60°	2865.8	74.5	45.5
0°-90°	3845.9	100.0	61.0
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°	3845.9	100.0	61.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1243	1243	1243	1243	1243	
5°	1238	1236	1237	1239	1241	118
15°	1184	1186	1194	1204	1209	334
25°	1086	1094	1116	1140	1149	500
35°	942	960	1001	1023	1038	589
45°	765	796	842	903	934	589
55°	562	608	689	783	824	502
65°	360	414	531	647	706	359
75°	195	234	347	477	545	205
85°	41	47	63	83	93	48
90°	0	0	0	0	0	2
95°	0	0	0	0	0	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	0	0	0	0	0
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1243	1243	1243	1243	1243
2.5°	1244	1241	1240	1242	1242
5°	1238	1236	1237	1239	1241
7.5°	1229	1228	1230	1234	1236
10°	1217	1217	1221	1227	1228
12.5°	1202	1203	1209	1217	1220
15°	1184	1186	1194	1204	1209
17.5°	1163	1167	1177	1192	1197
20°	1140	1145	1159	1176	1182
22.5°	1114	1121	1139	1159	1168
25°	1086	1094	1116	1140	1149
27.5°	1055	1064	1091	1118	1123
30°	1020	1032	1064	1087	1092
32.5°	982	997	1034	1054	1065
35°	942	960	1001	1023	1038
37.5°	901	922	960	993	1010
40°	858	881	919	962	983
42.5°	812	839	880	933	958
45°	765	796	842	903	934
47.5°	716	753	804	875	909
50°	666	707	766	846	884
52.5°	615	659	727	816	856
55°	562	608	689	783	824
57.5°	509	555	650	748	791
60°	458	507	611	712	761
62.5°	408	460	572	680	735
65°	360	414	531	647	706
67.5°	316	369	488	613	676
70°	274	324	445	575	642
72.5°	234	279	399	531	601
75°	195	234	347	477	545
77.5°	155	187	288	401	457
80°	112	135	215	292	320
82.5°	72	86	131	153	162
85°	41	47	63	83	93
87.5°	18	20	25	31	35
90°	0	0	0	0	0
92.5°	0	0	0	0	0
95°	0	0	0	0	0
97.5°	0	0	0	0	0
100°	0	0	0	0	0
102.5°	0	0	0	0	0
105°	0	0	0	0	0
107.5°	0	0	0	0	0
110°	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0	0	0	0	0
115°	0	0	0	0	0
117.5°	0	0	0	0	0
120°	0	0	0	0	0
122.5°	0	0	0	0	0
125°	0	0	0	0	0
127.5°	0	0	0	0	0
130°	0	0	0	0	0
132.5°	0	0	0	0	0
135°	0	0	0	0	0
137.5°	0	0	0	0	0
140°	0	0	0	0	0
142.5°	0	0	0	0	0
145°	0	0	0	0	0
147.5°	0	0	0	0	0
150°	0	0	0	0	0
152.5°	0	0	0	0	0
155°	0	0	0	0	0
157.5°	0	0	0	0	0
160°	0	0	0	0	0
162.5°	0	0	0	0	0
165°	0	0	0	0	0
167.5°	0	0	0	0	0
170°	0	0	0	0	0
172.5°	0	0	0	0	0
175°	0	0	0	0	0
177.5°	0	0	0	0	0
180°	0	0	0	0	0

(END OF REPORT)