

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: BALLABS TEST NO. 9820.0

Luminaire Tested: **CATALOG NO. : 301IP/40BX**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: BALLABS TEST NO. 9820.0
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: CATALOG NO. : 301IP/40BX
Description: 4/40W BIAX LAMP 4'DIR/INDIRECT PENDANT MNT LUMINAIRE
WHITE LAMP ASSEMBLY IN PERF HOUSING w/WHITE ACRYLIC OVERL
Light Source: -
LAMP CODE : FT40W/2G11/35/RS
Ballast/Driver: 2 GOLDSTAR BALLAST #GB-2x32/FL/I/120

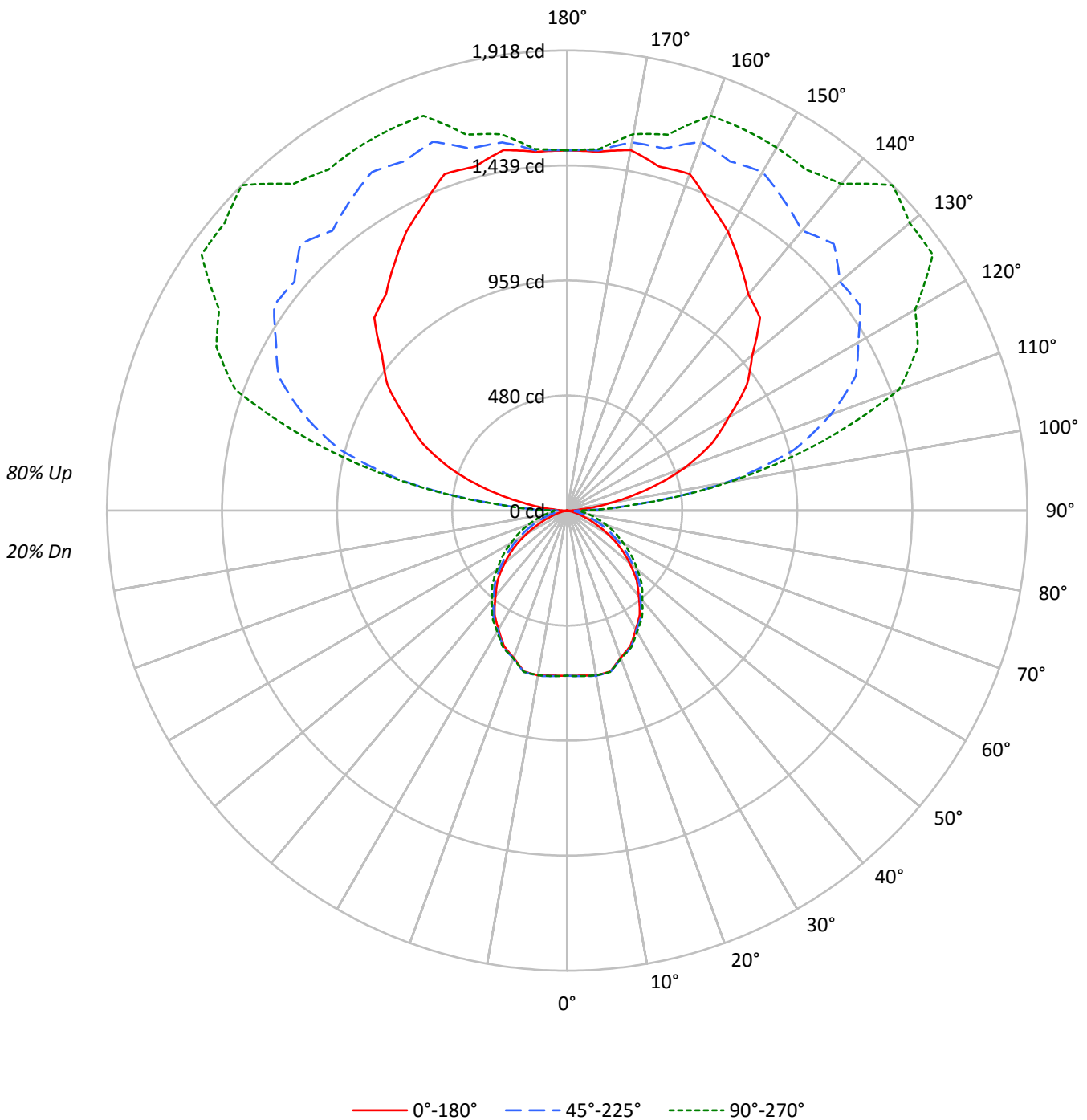
Summary

Lumens per Lamp: 3150 (4 lamps)
Luminaire Lumens: 8935.8 lumens
Efficiency: 70.9%
Efficacy: 67.2 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.26 / 1.33
Luminous Opening: Rectangular w/ Sides (W: 1.31' x L: 3.79' x H: 0.26')
CIE Type: Semi-Indirect

Input Watts (W): 133
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	71	71	71	71	63	63	63	63	47	47	47	33	33	33	20	20	20	14
1	65	62	59	57	57	55	52	50	41	40	39	29	28	28	18	17	17	12
2	59	54	50	46	52	48	44	41	36	34	32	26	24	23	16	15	14	10
3	54	47	42	39	47	42	38	35	32	29	27	23	21	20	14	13	12	9
4	49	42	37	33	43	37	33	29	28	25	23	20	18	17	13	12	11	7
5	45	37	32	28	40	33	28	25	25	22	20	18	16	14	11	10	9	7
6	41	33	28	24	36	30	25	22	23	19	17	16	14	13	10	9	8	6
7	38	30	25	21	34	27	22	19	20	17	15	15	13	11	9	8	7	5
8	35	27	22	18	31	24	20	16	19	15	13	13	11	10	9	7	6	5
9	33	24	19	16	29	22	18	15	17	14	12	12	10	9	8	7	6	4
10	30	22	17	14	27	20	16	13	16	12	10	11	9	8	7	6	5	4

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1490	1490	1490
5°	1491	1480	1479
10°	1514	1487	1481
15°	1528	1485	1482
20°	1466	1412	1408
25°	1442	1381	1378
30°	1376	1301	1308
35°	1332	1254	1263
40°	1240	1159	1180
45°	1172	1095	1127
50°	1056	990	1038
55°	935	892	965
60°	759	770	871
65°	558	657	791
70°	362	530	701
75°	206	412	611
80°	63	319	534
85°	0	244	480



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	66.2	0.7	0.5
10°-20°	194.0	2.2	1.5
20°-30°	287.0	3.2	2.3
30°-40°	332.7	3.7	2.6
40°-50°	325.2	3.6	2.6
50°-60°	266.7	3.0	2.1
60°-70°	175.9	2.0	1.4
70°-80°	89.0	1.0	0.7
80°-90°	39.6	0.4	0.3
90°-100°	299.2	3.3	2.4
100°-110°	893.9	10.0	7.1
110°-120°	1201.2	13.4	9.5
120°-130°	1274.0	14.3	10.1
130°-140°	1189.3	13.3	9.4
140°-150°	968.1	10.8	7.7
150°-160°	740.9	8.3	5.9
160°-170°	447.0	5.0	3.5
170°-180°	145.6	1.6	1.2
0°-30°	547.3	6.1	4.3
0°-40°	880.0	9.8	7.0
0°-60°	1471.9	16.5	11.7
0°-90°	1776.4	19.9	14.1
90°-120°	2394.3	26.8	19.0
90°-150°	5825.8	65.2	46.2
90°-180°	7159.0	80.1	56.8
0°-180°	8935.8	100.0	70.9

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	688	688	688	688	688	
5°	690	692	692	692	692	66
15°	694	697	696	697	696	193
25°	623	627	629	630	630	285
35°	528	531	537	540	544	327
45°	409	413	425	436	441	313
55°	272	279	300	319	328	241
65°	125	144	180	210	220	127
75°	31	47	84	116	127	36
85°	0	7	31	54	63	2
90°	0	21	35	47	53	8
95°	58	272	275	272	279	87
105°	351	659	980	1086	1088	371
115°	667	892	1328	1539	1613	652
125°	915	1137	1491	1775	1860	809
135°	1137	1372	1572	1818	1918	861
145°	1256	1392	1577	1675	1735	788
155°	1410	1480	1606	1719	1751	653
165°	1484	1503	1562	1602	1622	424
175°	1501	1503	1507	1510	1512	144
180°	1501	1501	1501	1501	1501	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	688	688	688	688	688
5°	690	692	692	692	692
10°	697	699	699	699	697
15°	694	697	696	697	696
20°	652	653	655	655	655
25°	623	627	629	630	630
30°	572	574	577	581	583
35°	528	531	537	540	544
40°	464	468	475	484	487
45°	409	413	425	436	441
50°	339	344	360	374	381
55°	272	279	300	319	328
60°	196	208	236	261	270
65°	125	144	180	210	220
70°	68	88	127	159	171
75°	31	47	84	116	127
80°	7	21	53	81	91
85°	0	7	31	54	63
90°	0	21	35	47	53
95°	58	272	275	272	279
100°	183	500	676	680	687
105°	351	659	980	1086	1088
110°	521	805	1169	1394	1471
115°	667	892	1328	1539	1613
120°	777	975	1401	1616	1675
125°	915	1137	1491	1775	1860
130°	1007	1251	1484	1774	1864
135°	1137	1372	1572	1818	1918
140°	1175	1348	1523	1706	1777
145°	1256	1392	1577	1675	1735
150°	1341	1452	1629	1719	1747
155°	1410	1480	1606	1719	1751
160°	1493	1540	1636	1715	1751
165°	1484	1503	1562	1602	1622
170°	1526	1533	1558	1583	1593
175°	1501	1503	1507	1510	1512
180°	1501	1501	1501	1501	1501

(END OF REPORT)