

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: P30417

Luminaire Tested: **2OPG-WO-232FB26W-UNV-HB81**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P30417
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2OPG-WO-232FB26W-UNV-HB81
Description: METALUX OPTICA HP SERIES RECESSED 2x4 FLUORECENT LUMINAIRE WITH WHITE OPTICS HOUSING, PAF BALLAST COVER & 12 CELL 2" DEEP STEEL LOUVER, FACETED MATTE WHITE CROSS BLADES, NO REFLECTOR
Light Source: TWO LINEAR FLUORESCENT LAMPS, F32T8 32W - 2850 LUMENS EA
Ballast/Driver: -
QHE3x32T8/UNV ISN-SC

Summary

Lumens per Lamp: 2850 (2 lamps)
Luminaire Lumens: 5098.1 lumens
Efficiency: 89.4%
Efficacy: 79.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.4 / 1.44
Luminous Opening: Rectangular (W 1.79' x L: 3.83' x H: 0')
CIE Type: Direct

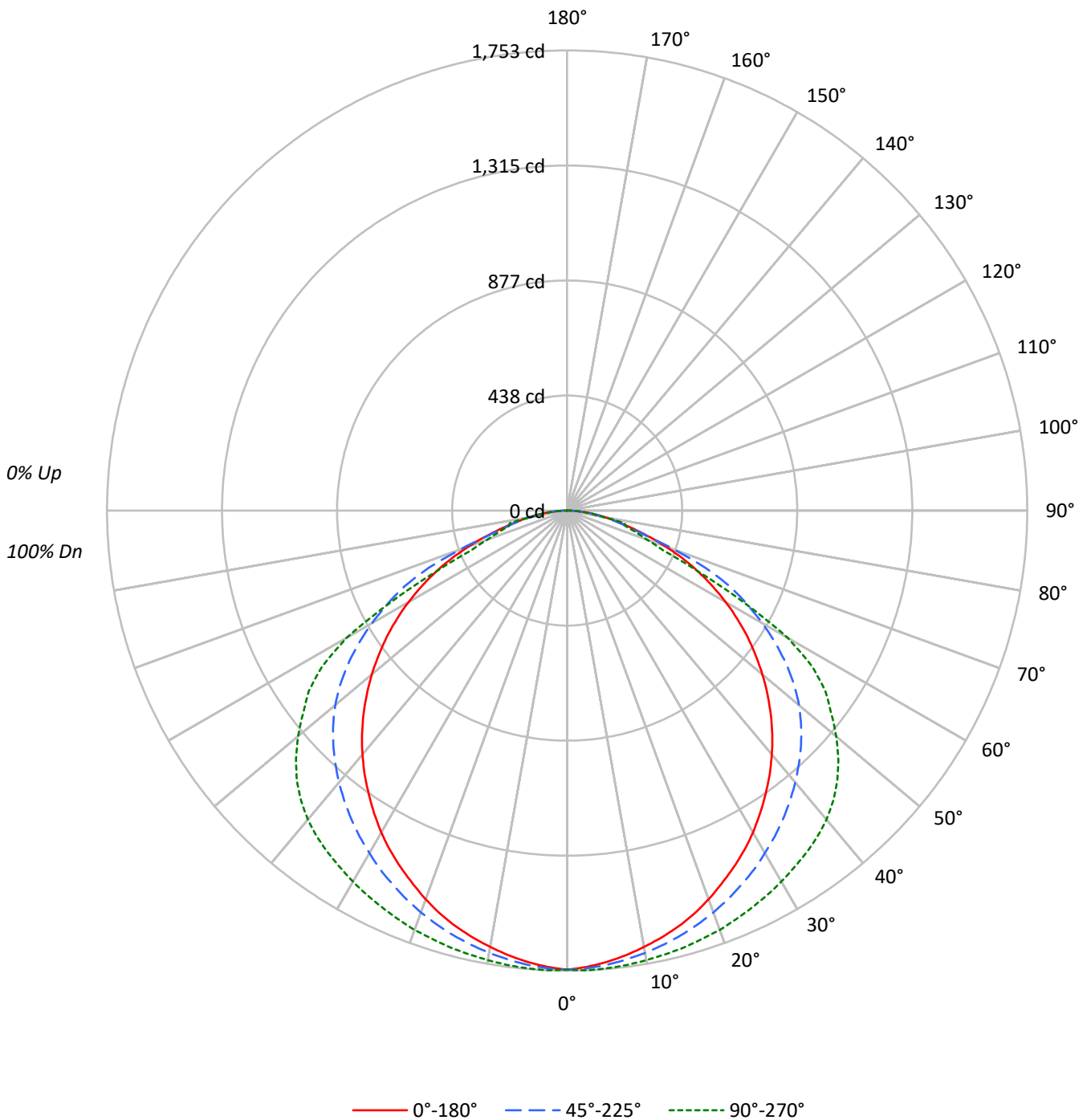
Input Watts (W): 63.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	106	106	106	106	104	104	104	104	99	99	99	95	95	95	91	91	91	89
1	98	93	90	86	95	91	88	85	88	85	82	84	82	80	81	79	77	76
2	89	82	76	71	87	80	74	70	77	72	68	74	70	67	71	68	65	63
3	81	72	64	59	79	70	64	58	68	62	57	65	60	56	63	59	55	53
4	74	63	56	50	72	62	55	49	60	54	49	58	52	48	56	51	47	45
5	68	57	49	43	66	56	48	42	54	47	42	52	46	41	50	45	41	39
6	63	51	43	37	61	50	42	37	48	42	37	47	41	36	45	40	36	34
7	58	46	38	33	57	45	38	32	44	37	32	43	37	32	41	36	32	30
8	54	42	34	29	53	41	34	29	40	33	29	39	33	29	38	32	28	27
9	50	38	31	26	49	38	31	26	37	30	26	36	30	26	35	29	26	24
10	47	35	28	24	46	35	28	23	34	28	23	33	27	23	32	27	23	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2741	2741	2741
5°	2715	2733	2753
10°	2686	2723	2767
15°	2661	2718	2796
20°	2628	2717	2835
25°	2594	2718	2884
30°	2563	2727	2953
35°	2522	2744	3042
40°	2482	2766	3145
45°	2431	2793	3227
50°	2367	2811	3262
55°	2292	2784	3284
60°	2188	2693	3044
65°	2043	2537	2040
70°	1824	1984	1480
75°	1520	1429	1405
80°	1327	1273	1227
85°	1205	1115	1043



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	165.0	3.2	2.9	0°	1749	1749	1749	1749	1749	
10°-20°	473.6	9.3	8.3	5°	1726	1731	1737	1740	1750	164
20°-30°	727.8	14.3	12.8	15°	1640	1650	1675	1701	1723	462
30°-40°	903.8	17.7	15.9	25°	1500	1522	1572	1629	1668	691
40°-50°	975.7	19.1	17.1	35°	1318	1353	1434	1532	1590	825
50°-60°	903.2	17.7	15.8	45°	1097	1143	1260	1387	1456	846
60°-70°	608.8	11.9	10.7	55°	839	898	1019	1123	1202	748
70°-80°	268.4	5.3	4.7	65°	551	611	684	608	550	544
80°-90°	71.6	1.4	1.3	75°	251	273	236	228	232	273
90°-100°	0.2	0.0	0.0	85°	67	67	62	59	58	71
100°-110°	0.0	0.0	0.0	90°	1	3	1	1	2	5
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	1366.3	26.8	24.0	165°	0	0	0	0	0	0
0°-40°	2270.1	44.5	39.8	175°	0	0	0	0	0	0
0°-60°	4149.0	81.4	72.8	180°	0	0	0	0	0	0
0°-90°	5097.8	100.0	89.4							
90°-120°	0.2	0.0	0.0							
90°-150°	0.2	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	5098.1	100.0	89.4							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1749	1749	1749	1749	1749
2.5°	1740	1743	1745	1746	1753
5°	1726	1731	1737	1740	1750
7.5°	1709	1715	1725	1733	1746
10°	1688	1696	1711	1725	1739
12.5°	1665	1674	1694	1714	1731
15°	1640	1650	1675	1701	1723
17.5°	1610	1622	1653	1685	1711
20°	1576	1591	1629	1670	1700
22.5°	1538	1558	1602	1650	1684
25°	1500	1522	1572	1629	1668
27.5°	1460	1484	1542	1608	1651
30°	1416	1443	1507	1585	1632
32.5°	1368	1399	1472	1559	1611
35°	1318	1353	1434	1532	1590
37.5°	1267	1304	1394	1504	1566
40°	1213	1253	1352	1471	1537
42.5°	1157	1199	1307	1433	1500
45°	1097	1143	1260	1387	1456
47.5°	1035	1084	1209	1333	1401
50°	971	1025	1153	1270	1338
52.5°	905	962	1090	1198	1268
55°	839	898	1019	1123	1202
57.5°	769	829	942	1048	1108
60°	698	759	859	943	971
62.5°	625	687	773	799	761
65°	551	611	684	608	550
67.5°	476	529	571	437	398
70°	398	444	433	329	323
72.5°	322	357	311	275	274
75°	251	273	236	228	232
77.5°	192	196	187	192	224
80°	147	147	141	147	136
82.5°	105	105	99	95	94
85°	67	67	62	59	58
87.5°	31	31	28	26	24
90°	1	3	1	1	2
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)