

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: P30592

Luminaire Tested: **2HP2GX-WO-2U158W23P-UNV-HB81**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: P30592  
Test Lab: METALUX RESEARCH LABS  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 2HP2GX-WO-2U158W23P-UNV-HB81  
Description: METALUX HP3 HIGH PERFORMANCE RECESSED 2x4 FLUORESCENT LUMINAIRE  
WHITE OPTICS HOUSING, 6 CELL WHITE LOUVER, PAF BALLAST COVER  
Light Source: (2) TWO 31-WATT T-8 1.625" U-LAMP FLUORESCENTS - 2775 LUMENS EA  
Ballast/Driver: -  
GE232MAX-N

**Summary**

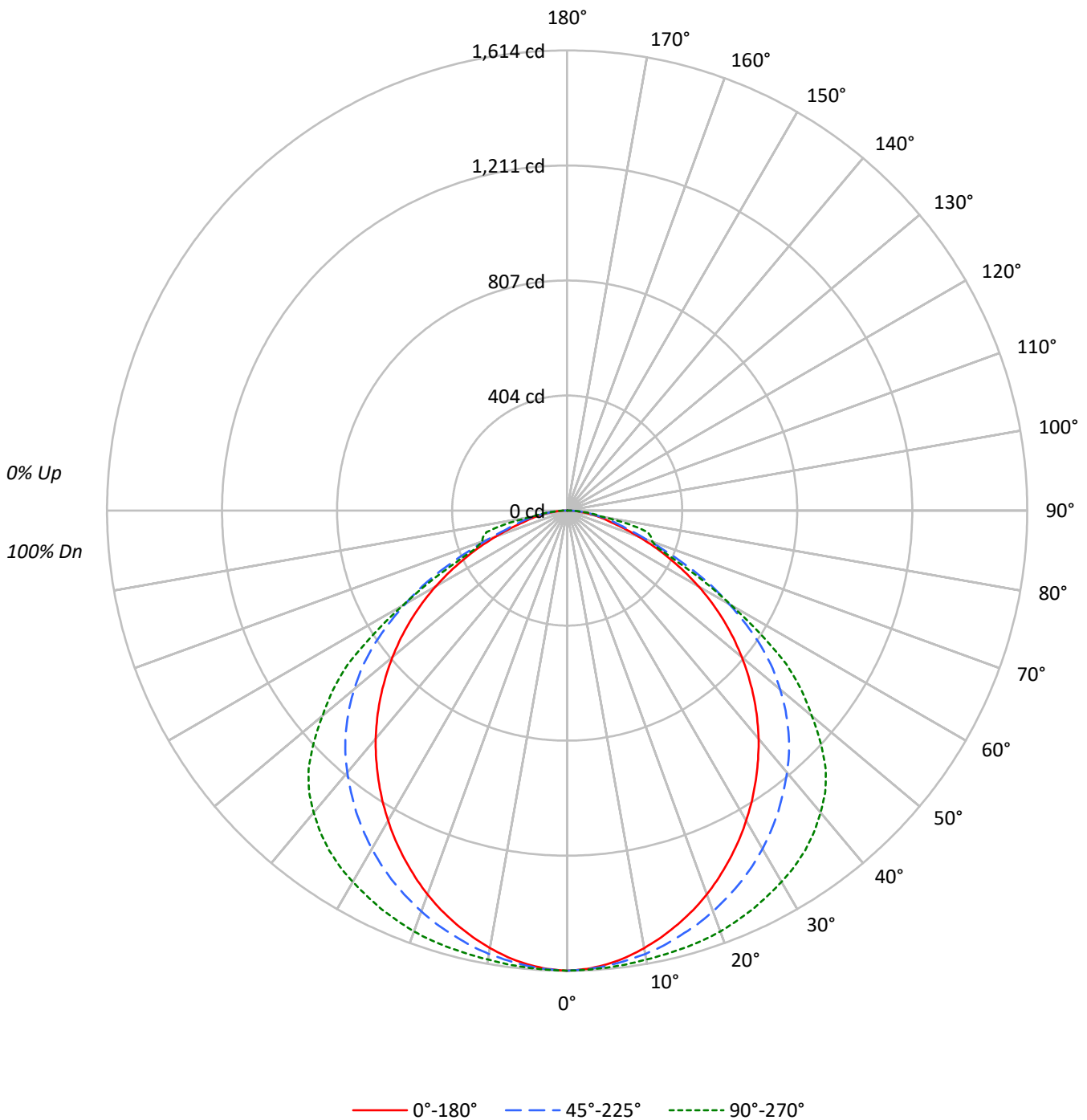
Lumens per Lamp: 2775 (2 lamps)  
Luminaire Lumens: 4349.5 lumens  
Efficiency: 78.4%  
Efficacy: 88.9 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.39 / 1.4  
Luminous Opening: Rectangular (W 1.75' x L: 1.75' x H: 0')  
CIE Type: Direct

Input Watts (W): 48.9  
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: P30592

CATALOG NUMBER: 2HP2GX-WO-2U158W23P-UNV-HB81

### Luminous Intensity Polar Plot





TEST NUMBER: P30592

CATALOG NUMBER: 2HP2GX-WO-2U158W23P-UNV-HB81

**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	93	93	93	93	91	91	91	91	87	87	87	83	83	83	80	80	80	78
1	86	82	79	76	84	80	78	75	77	75	73	74	72	70	71	70	68	67
2	78	72	67	63	76	71	66	62	68	64	61	65	62	59	63	60	58	56
3	72	64	58	53	70	62	57	52	60	55	51	58	54	50	56	52	49	48
4	66	57	50	45	64	56	49	44	54	48	44	52	47	43	50	46	43	41
5	60	51	44	39	59	50	43	38	48	42	38	47	42	38	45	41	37	36
6	56	46	39	34	54	45	38	34	43	38	33	42	37	33	41	36	33	31
7	52	41	35	30	50	41	34	30	40	34	30	38	33	29	37	33	29	28
8	48	38	31	27	47	37	31	27	36	30	26	35	30	26	34	30	26	25
9	45	35	28	24	44	34	28	24	33	28	24	32	27	24	32	27	24	22
10	42	32	26	22	41	32	26	22	31	25	22	30	25	21	29	25	21	20

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

	0°	45°	90°
0°	5673	5673	5673
5°	5638	5656	5677
10°	5560	5635	5707
15°	5465	5611	5778
20°	5360	5596	5876
25°	5232	5581	5980
30°	5097	5560	6104
35°	4951	5535	6243
40°	4795	5506	6345
45°	4603	5458	6377
50°	4374	5331	6130
55°	4099	5092	5754
60°	3740	4611	4675
65°	3277	3934	3576
70°	2734	3032	3268
75°	2173	2526	3979
80°	2024	2287	2530
85°	1895	2137	2379



TEST NUMBER: P30592

CATALOG NUMBER: 2HP2GX-WO-2U158W23P-UNV-HB81

**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	152.3	3.5	2.7	0°	1614	1614	1614	1614	1614	
10°-20°	436.1	10.0	7.9	5°	1598	1599	1603	1607	1609	151
20°-30°	664.7	15.3	12.0	15°	1502	1514	1542	1576	1588	423
30°-40°	810.9	18.6	14.6	25°	1349	1375	1439	1508	1542	621
40°-50°	845.3	19.4	15.2	35°	1154	1195	1290	1397	1455	721
50°-60°	721.1	16.6	13.0	45°	926	983	1098	1216	1283	713
60°-70°	442.6	10.2	8.0	55°	669	732	831	890	939	597
70°-80°	216.0	5.0	3.9	65°	394	445	473	436	430	392
80°-90°	60.2	1.4	1.1	75°	160	174	186	235	293	179
90°-100°	0.3	0.0	0.0	85°	47	50	53	58	59	50
100°-110°	0.0	0.0	0.0	90°	1	3	3	3	1	3
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°	1253.0	28.8	22.6	165°	0	0	0	0	0	0
0°-40°	2063.9	47.5	37.2	175°	0	0	0	0	0	0
0°-60°	3630.3	83.5	65.4	180°	0	0	0	0	0	0
0°-90°	4349.1	100.0	78.4							
90°-120°	0.3	0.0	0.0							
90°-150°	0.3	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	4349.5	100.0	78.4							



TEST NUMBER: P30592

CATALOG NUMBER: 2HP2GX-WO-2U158W23P-UNV-HB81

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1614	1614	1614	1614	1614
2.5°	1609	1609	1610	1612	1612
5°	1598	1599	1603	1607	1609
7.5°	1581	1584	1592	1602	1605
10°	1558	1563	1579	1594	1599
12.5°	1532	1540	1563	1586	1594
15°	1502	1514	1542	1576	1588
17.5°	1469	1484	1521	1564	1581
20°	1433	1450	1496	1548	1571
22.5°	1392	1413	1468	1530	1557
25°	1349	1375	1439	1508	1542
27.5°	1304	1333	1406	1483	1523
30°	1256	1290	1370	1457	1504
32.5°	1206	1243	1331	1428	1482
35°	1154	1195	1290	1397	1455
37.5°	1100	1145	1245	1360	1422
40°	1045	1095	1200	1318	1383
42.5°	986	1040	1152	1269	1340
45°	926	983	1098	1216	1283
47.5°	863	923	1039	1149	1206
50°	800	862	975	1067	1121
52.5°	735	798	908	977	1037
55°	669	732	831	890	939
57.5°	602	664	745	788	802
60°	532	594	656	660	665
62.5°	463	521	570	540	545
65°	394	445	473	436	430
67.5°	329	371	375	345	345
70°	266	299	295	286	318
72.5°	208	232	230	260	309
75°	160	174	186	235	293
77.5°	130	137	151	195	225
80°	100	106	113	125	125
82.5°	74	78	83	91	92
85°	47	50	53	58	59
87.5°	23	24	25	28	28
90°	1	3	3	3	1
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



TEST NUMBER: P30592

CATALOG NUMBER: 2HP2GX-WO-2U158W23P-UNV-HB81

**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)