

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: P30591

Luminaire Tested: **2HP3-WO-2U158W23P-HB81**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P30591
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2HP3-WO-2U158W23P-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

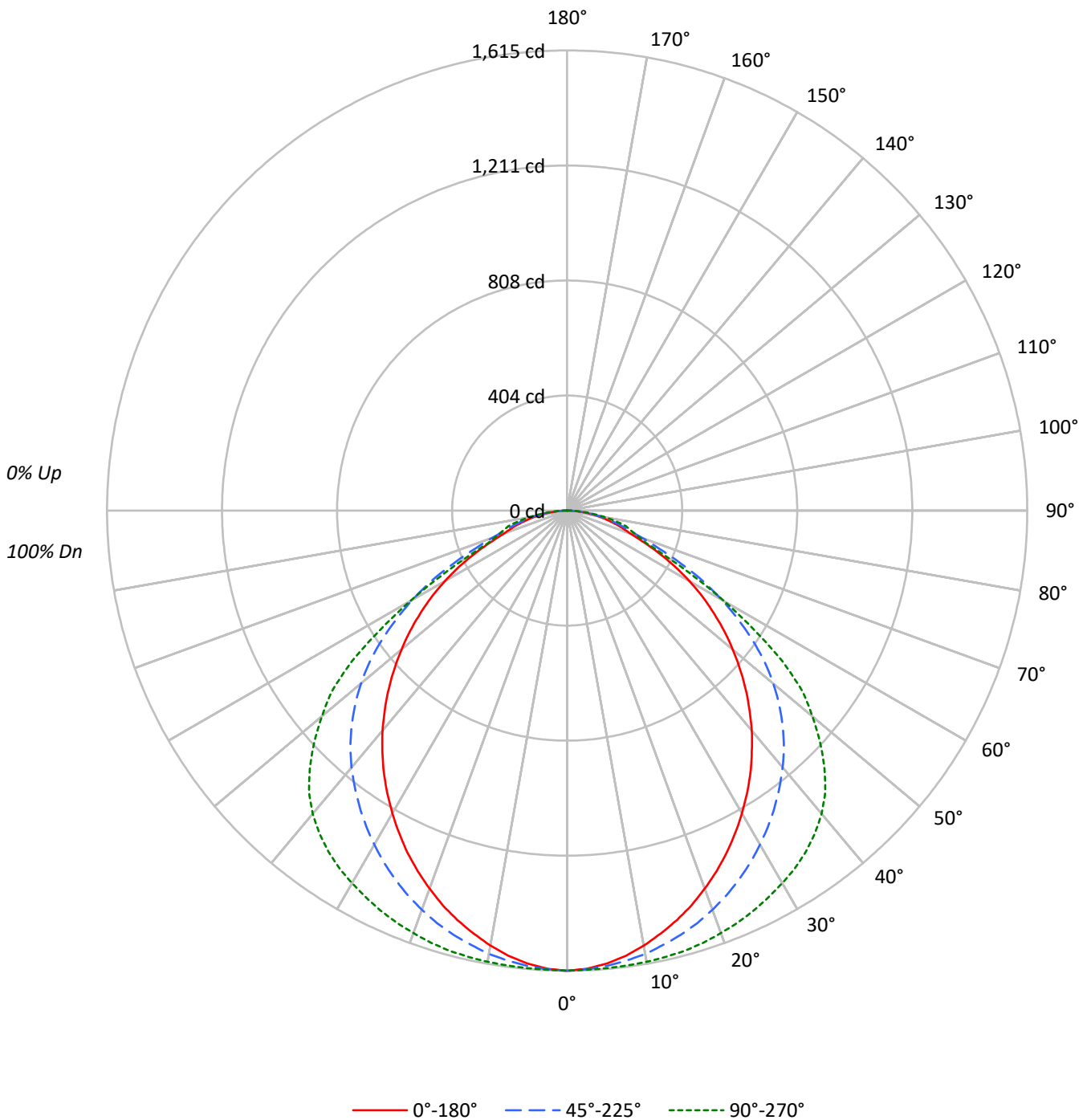
Lumens per Lamp: 2775 (2 lamps)
Luminaire Lumens: 4239.2 lumens
Efficiency: 76.4%
Efficacy: 86.9 lumens/watt
Spacing Criteria (0/90/45): 1.14 / 1.39 / 1.38
Luminous Opening: Rectangular (W 1.75' x L: 1.75' x H: 0')
CIE Type: Direct

Input Watts (W): 48.8
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									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	91	91	91	91	89	89	89	89	85	85	85	81	81	81	78	78	78	76					76														
1	84	80	77	74	82	79	76	73	75	73	71	72	70	69	70	68	67	65					65														
2	77	71	66	61	75	69	65	61	66	63	59	64	61	58	62	59	57	55					55														
3	70	62	56	52	68	61	56	51	59	54	50	57	53	49	55	51	49	47					47														
4	64	55	49	44	63	54	48	44	53	47	43	51	46	43	49	45	42	40					40														
5	59	50	43	38	58	49	43	38	47	42	37	46	41	37	44	40	37	35					35														
6	55	45	38	33	53	44	38	33	43	37	33	41	36	33	40	36	32	31					31														
7	51	41	34	30	49	40	34	29	39	33	29	38	33	29	37	32	29	27					27														
8	47	37	31	26	46	37	31	26	36	30	26	35	30	26	34	29	26	24					24														
9	44	34	28	24	43	34	28	24	33	27	24	32	27	23	31	27	23	22					22														
10	41	31	25	22	40	31	25	21	30	25	21	30	25	21	29	24	21	20					20														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5676	5676	5676
5°	5631	5659	5687
10°	5532	5639	5739
15°	5414	5607	5818
20°	5281	5577	5902
25°	5138	5538	6007
30°	4980	5495	6128
35°	4814	5449	6269
40°	4625	5400	6373
45°	4404	5319	6347
50°	4150	5167	6146
55°	3854	4872	5656
60°	3487	4407	4478
65°	2969	3668	3235
70°	2425	2857	2713
75°	2281	2526	2906
80°	2146	2368	2753
85°	1936	2178	2460



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	152.3	3.6	2.7	0°	1615	1615	1615	1615	1615	
10°-20°	435.3	10.3	7.8	5°	1596	1599	1604	1609	1612	151
20°-30°	660.4	15.6	11.9	15°	1488	1504	1541	1582	1599	419
30°-40°	800.8	18.9	14.4	25°	1325	1359	1428	1506	1549	610
40°-50°	826.2	19.5	14.9	35°	1122	1172	1270	1389	1461	701
50°-60°	694.8	16.4	12.5	45°	886	948	1070	1199	1277	683
60°-70°	408.7	9.6	7.4	55°	629	693	795	877	923	562
70°-80°	198.7	4.7	3.6	65°	357	406	441	403	389	356
80°-90°	61.6	1.5	1.1	75°	168	176	186	199	214	179
90°-100°	0.4	0.0	0.0	85°	48	51	54	58	61	51
100°-110°	0.0	0.0	0.0	90°	2	3	3	3	2	4
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°	1248.1	29.4	22.5	165°	0	0	0	0	0	0
0°-40°	2048.8	48.3	36.9	175°	0	0	0	0	0	0
0°-60°	3569.9	84.2	64.3	180°	0	0	0	0	0	0
0°-90°	4238.9	100.0	76.4							
90°-120°	0.4	0.0	0.0							
90°-150°	0.4	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	4239.2	100.0	76.4							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1615	1615	1615	1615	1615
2.5°	1609	1611	1611	1612	1613
5°	1596	1599	1604	1609	1612
7.5°	1576	1581	1593	1605	1610
10°	1550	1559	1580	1600	1608
12.5°	1520	1532	1561	1591	1604
15°	1488	1504	1541	1582	1599
17.5°	1452	1472	1518	1568	1590
20°	1412	1437	1491	1550	1578
22.5°	1370	1399	1461	1529	1565
25°	1325	1359	1428	1506	1549
27.5°	1277	1317	1393	1481	1530
30°	1227	1271	1354	1451	1510
32.5°	1175	1223	1313	1421	1488
35°	1122	1172	1270	1389	1461
37.5°	1065	1120	1224	1351	1428
40°	1008	1066	1177	1308	1389
42.5°	947	1007	1126	1258	1341
45°	886	948	1070	1199	1277
47.5°	823	886	1010	1127	1204
50°	759	823	945	1048	1124
52.5°	695	760	875	964	1041
55°	629	693	795	877	923
57.5°	564	624	712	761	777
60°	496	555	627	632	637
62.5°	428	482	539	509	504
65°	357	406	441	403	389
67.5°	292	329	349	316	302
70°	236	258	278	260	264
72.5°	202	211	224	228	235
75°	168	176	186	199	214
77.5°	137	143	151	166	176
80°	106	112	117	129	136
82.5°	76	81	84	92	96
85°	48	51	54	58	61
87.5°	22	24	25	27	27
90°	2	3	3	3	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)