

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: P30352

Luminaire Tested: **2HP2-232S26I-UNV-HB81**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: P30352  
Test Lab: METALUX RESEARCH LABS  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 2HP2-232S26I-UNV-HB81  
Description: METALUX PARABOLIC 2HP2 SERIES 2'x4' WITH WHITE HIGH-REFLECTANCE  
PRE-PAINT STEEL HSG, NO REFLECTOR, 12 CELL, 2" DEEP, FORMED SEMI-SPECULAR  
ALUMINUM LOUVER, TALL SOCKETS  
Light Source: TWO LINEAR FLUORESCENT LAMPS, F32T8 32W - 2800 LUMENS EA  
SYLVANIA FO32/735 32W  
Ballast/Driver: -  
GE232MAX-ULTRA-N

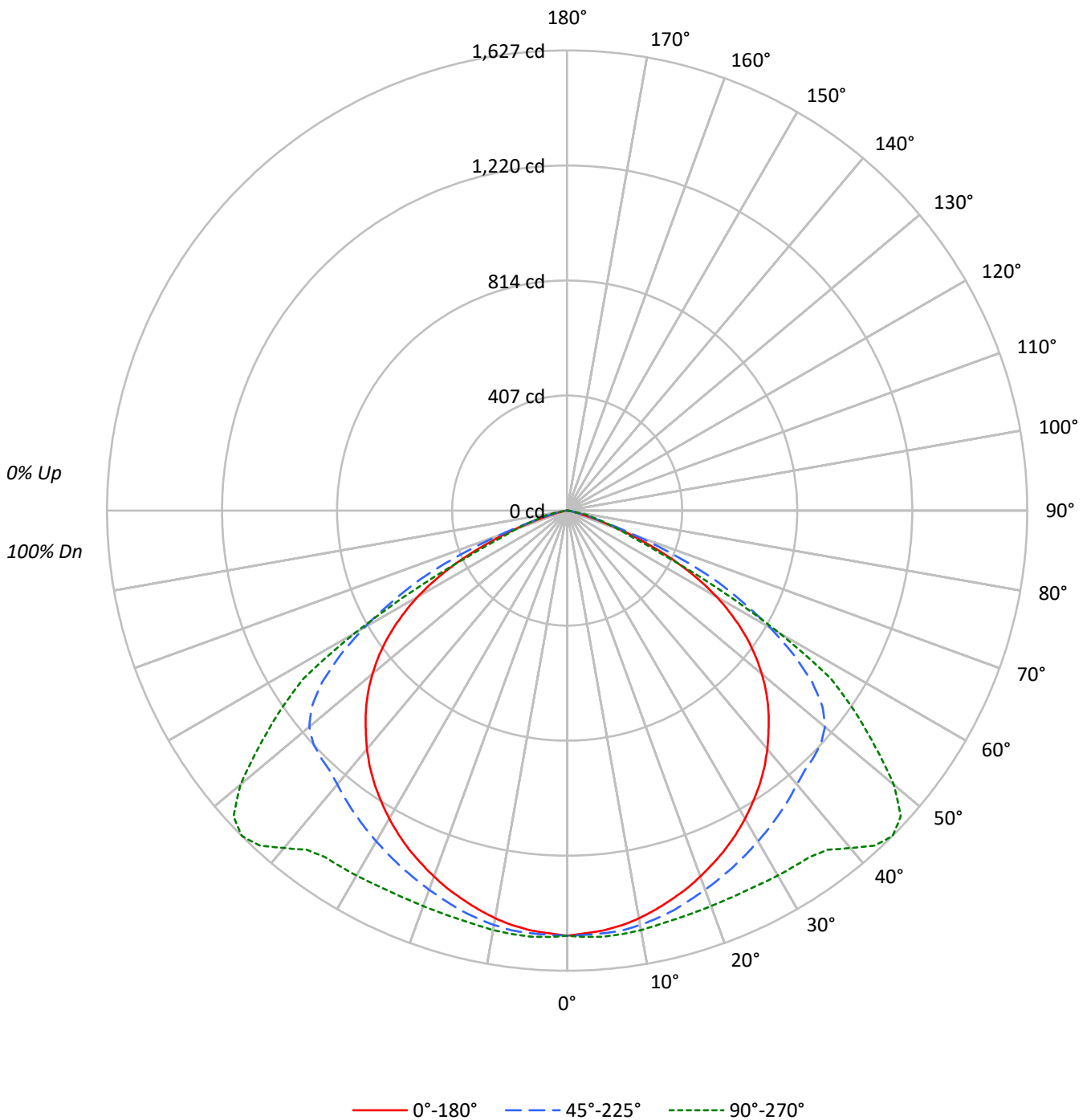
**Summary**

Lumens per Lamp: 2800 (2 lamps)  
Luminaire Lumens: 4507.6 lumens  
Efficiency: 80.5%  
Efficacy: 90.7 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.54 / 1.56  
Luminous Opening: Rectangular (W 1.75' x L: 3.79' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 49.7  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	50	30	10	0													
RCR																																					
0	96	96	96	96	94	94	94	94	89	89	89	86	86	86	82	82	82	80																			
1	89	85	82	79	87	83	81	78	80	78	76	77	75	73	74	73	71	70																			
2	81	75	70	66	79	73	69	65	71	67	63	68	65	62	66	63	61	59																			
3	74	66	60	55	72	65	59	54	62	57	53	60	56	52	58	55	52	50																			
4	68	58	52	46	66	57	51	46	55	50	45	53	49	45	52	48	44	43																			
5	62	52	45	40	60	51	44	40	49	44	39	48	43	39	46	42	38	37																			
6	57	47	40	34	56	46	39	34	44	38	34	43	38	34	42	37	33	32																			
7	53	42	35	30	51	41	35	30	40	34	30	39	34	30	38	33	29	28																			
8	49	38	31	27	48	38	31	27	37	31	27	36	30	26	35	30	26	25																			
9	46	35	28	24	45	34	28	24	34	28	24	33	27	24	32	27	23	22																			
10	43	32	26	22	42	32	26	21	31	25	21	30	25	21	29	25	21	20																			

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

	0°	45°	90°
0°	2438	2438	2438
5°	2426	2443	2462
10°	2412	2451	2481
15°	2391	2455	2509
20°	2377	2463	2569
25°	2366	2488	2658
30°	2356	2529	2791
35°	2347	2592	2961
40°	2331	2677	3297
45°	2310	2829	3733
50°	2266	3003	3806
55°	2175	2989	3518
60°	1986	2690	2813
65°	1593	2180	1489
70°	977	1209	911
75°	326	489	589
80°	159	187	224
85°	112	149	130



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	142.7	3.2	2.5	0°	1503	1503	1503	1503	1503	
10°-20°	412.9	9.2	7.4	5°	1490	1493	1500	1501	1512	141
20°-30°	645.7	14.3	11.5	15°	1424	1441	1462	1478	1494	402
30°-40°	831.7	18.5	14.9	25°	1322	1346	1390	1450	1485	609
40°-50°	976.5	21.7	17.4	35°	1185	1219	1309	1428	1495	741
50°-60°	906.4	20.1	16.2	45°	1007	1062	1233	1481	1627	776
60°-70°	481.7	10.7	8.6	55°	769	863	1057	1171	1244	683
70°-80°	100.7	2.2	1.8	65°	415	500	568	445	388	407
80°-90°	9.0	0.2	0.2	75°	52	78	78	88	94	81
90°-100°	0.1	0.0	0.0	85°	6	6	8	7	7	7
100°-110°	0.0	0.0	0.0	90°	0	2	0	1	0	0
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°	1201.4	26.7	21.5	165°	0	0	0	0	0	0
0°-40°	2033.1	45.1	36.3	175°	0	0	0	0	0	0
0°-60°	3916.0	86.9	69.9	180°	0	0	0	0	0	0
0°-90°	4507.5	100.0	80.5							
90°-120°	0.1	0.0	0.0							
90°-150°	0.1	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	4507.6	100.0	80.5							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1503	1503	1503	1503	1503
2.5°	1496	1499	1501	1501	1509
5°	1490	1493	1500	1501	1512
7.5°	1479	1486	1497	1501	1510
10°	1464	1473	1488	1496	1506
12.5°	1445	1459	1476	1489	1499
15°	1424	1441	1462	1478	1494
17.5°	1402	1421	1444	1472	1491
20°	1377	1399	1427	1466	1488
22.5°	1350	1373	1408	1458	1486
25°	1322	1346	1390	1450	1485
27.5°	1291	1318	1370	1444	1487
30°	1258	1286	1350	1438	1490
32.5°	1222	1253	1330	1433	1492
35°	1185	1219	1309	1428	1495
37.5°	1145	1184	1287	1426	1512
40°	1101	1145	1264	1437	1557
42.5°	1054	1104	1244	1464	1607
45°	1007	1062	1233	1481	1627
47.5°	956	1019	1218	1468	1600
50°	898	972	1190	1410	1508
52.5°	837	923	1138	1301	1374
55°	769	863	1057	1171	1244
57.5°	693	793	951	1043	1106
60°	612	711	829	894	867
62.5°	519	613	698	666	614
65°	415	500	568	445	388
67.5°	306	375	409	268	255
70°	206	258	255	183	192
72.5°	119	157	139	132	136
75°	52	78	78	88	94
77.5°	27	31	41	53	69
80°	17	20	20	24	24
82.5°	10	12	12	12	12
85°	6	6	8	7	7
87.5°	3	4	3	4	4
90°	0	2	0	1	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)