

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: ITL63219

Luminaire Tested: **2OPG-2U15/8FB23W-UNV-EB81-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: ITL63219
Test Lab: INDEPENDENT TESTING LABORATORIES, INC.
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2OPG-2U15/8FB23W-UNV-EB81-U
Description: 2X2 RECESSED LUMINAIRE, MATTE WHITE PAF FINISH, WITH 6 CELL
2" DEEP, STEEL LOUVER, WITH FACETED CROSS BLADES, NO REFLECTOR.
Light Source: TWO 31-WATT T-8 1.625" U-LAMP FLUORESCENTS - 2750 LUMENS EA
Ballast/Driver: -

Summary

Lumens per Lamp: 2750 (2 lamps)
Luminaire Lumens: 4535.0 lumens
Efficiency: 82.5%
Efficacy: 88.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.38 / 1.4
Luminous Opening: Rectangular (W 1.79' x L: 1.82' x H: 0')
CIE Type: Direct

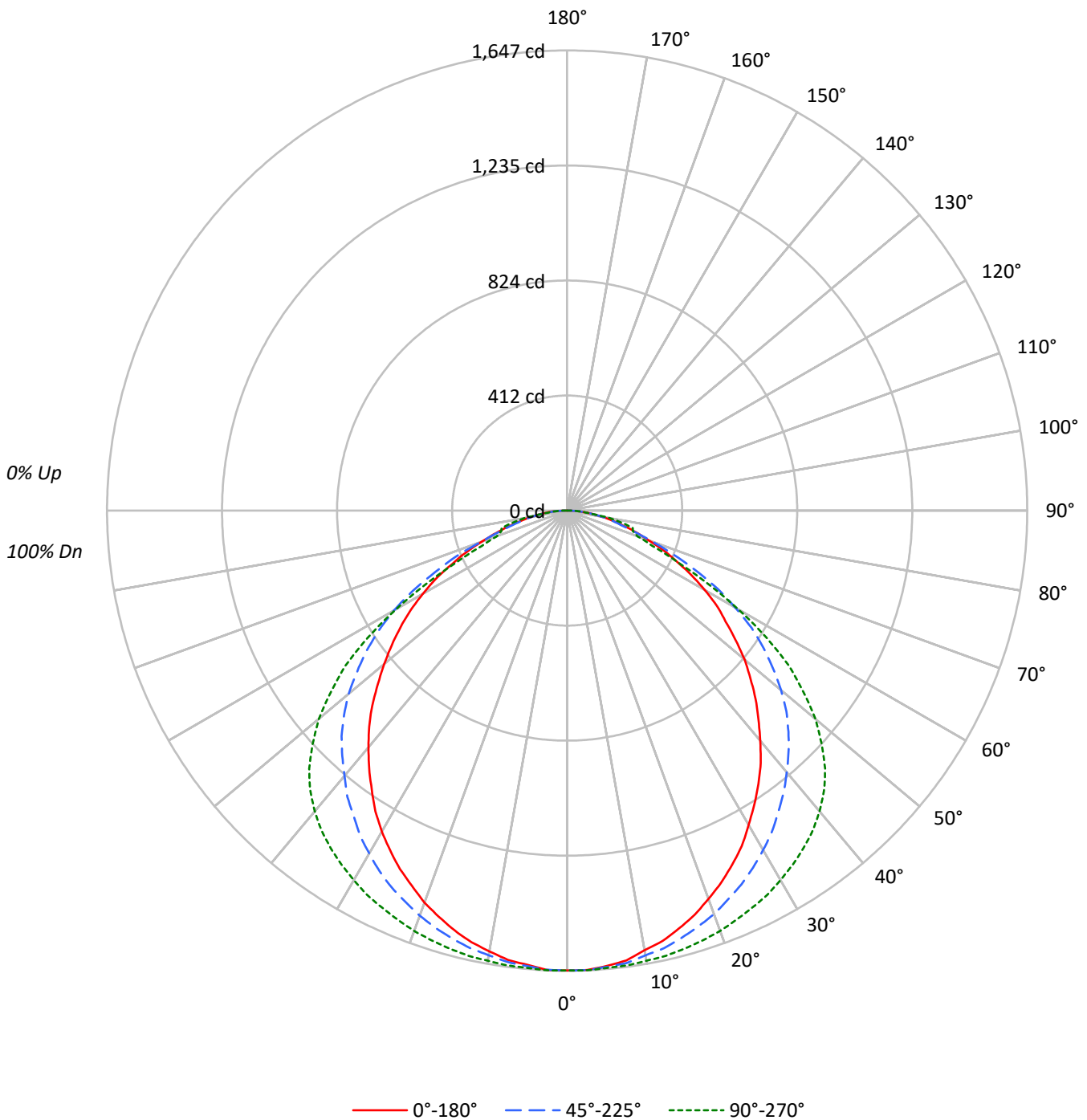
Input Watts (W): 51.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	98	98	98	96	96	96	96	92	92	92	88	88	88	84	84	84	82
1	90	86	83	80	88	85	81	79	81	79	76	78	76	74	75	73	72	70
2	82	76	70	66	80	74	69	65	71	67	63	69	65	62	66	63	61	59
3	75	67	60	55	73	65	59	54	63	58	54	61	56	53	59	55	52	50
4	69	59	52	47	67	58	52	46	56	50	46	54	49	45	52	48	45	43
5	63	53	46	40	62	52	45	40	50	44	40	49	43	39	47	43	39	37
6	59	48	40	35	57	47	40	35	45	39	35	44	39	34	43	38	34	32
7	54	43	36	31	53	43	36	31	41	35	31	40	35	31	39	34	30	29
8	51	39	33	28	49	39	32	28	38	32	27	37	31	27	36	31	27	26
9	47	36	29	25	46	36	29	25	35	29	25	34	28	25	33	28	24	23
10	44	33	27	23	43	33	27	23	32	26	22	31	26	22	31	26	22	21

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5425	5425	5425
5°	5412	5435	5399
10°	5348	5475	5361
15°	5282	5538	5309
20°	5187	5615	5236
25°	5084	5702	5149
30°	4943	5811	5046
35°	4804	5934	4904
40°	4625	6045	4758
45°	4446	6087	4600
50°	4250	5948	4384
55°	3976	5568	4183
60°	3750	4667	3935
65°	3384	3384	3556
70°	2978	2582	3132
75°	2649	3094	2725
80°	2372	2942	2486
85°	2231	2118	2534



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	155.8	3.4	2.8	0°	1646	1646	1646	1646	1646	
10°-20°	447.9	9.9	8.1	5°	1636	1639	1643	1637	1632	155
20°-30°	684.3	15.1	12.4	15°	1548	1583	1623	1586	1556	436
30°-40°	835.0	18.4	15.2	25°	1398	1476	1568	1488	1416	644
40°-50°	872.5	19.2	15.9	35°	1194	1317	1475	1333	1219	746
50°-60°	758.1	16.7	13.8	45°	954	1120	1306	1142	987	735
60°-70°	481.5	10.6	8.8	55°	692	858	969	877	728	623
70°-80°	230.3	5.1	4.2	65°	434	508	434	521	456	433
80°-90°	69.7	1.5	1.3	75°	208	199	243	203	214	224
90°-100°	0.0	0.0	0.0	85°	59	58	56	62	67	67
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	
110°-120°	0.0	0.0	0.0							
120°-130°	0.0	0.0	0.0							
130°-140°	0.0	0.0	0.0							
140°-150°	0.0	0.0	0.0							
150°-160°	0.0	0.0	0.0							
160°-170°	0.0	0.0	0.0							
170°-180°	0.0	0.0	0.0							
0°-30°	1288.0	28.4	23.4							
0°-40°	2123.0	46.8	38.6							
0°-60°	3753.5	82.8	68.2							
0°-90°	4535.0	100.0	82.5							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	4535.0	100.0	82.5							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1646	1646	1646	1646	1646	1646	1646	1646	1646
2.5°	1646	1646	1646	1646	1647	1645	1645	1644	1646
5°	1636	1636	1639	1642	1643	1639	1637	1633	1632
7.5°	1624	1625	1633	1640	1642	1637	1630	1623	1622
10°	1598	1606	1616	1631	1636	1628	1616	1607	1602
12.5°	1578	1585	1604	1623	1632	1620	1604	1588	1582
15°	1548	1559	1583	1610	1623	1607	1586	1564	1556
17.5°	1517	1534	1561	1597	1613	1598	1566	1540	1525
20°	1479	1498	1537	1580	1601	1579	1543	1509	1493
22.5°	1441	1463	1506	1559	1585	1560	1515	1476	1453
25°	1398	1422	1476	1536	1568	1539	1488	1437	1416
27.5°	1354	1382	1441	1512	1551	1515	1455	1399	1372
30°	1299	1334	1403	1483	1527	1485	1417	1351	1326
32.5°	1247	1285	1364	1454	1503	1457	1379	1308	1277
35°	1194	1238	1317	1423	1475	1427	1333	1260	1219
37.5°	1138	1184	1273	1385	1444	1391	1292	1204	1164
40°	1075	1130	1223	1346	1405	1353	1240	1151	1106
42.5°	1013	1068	1173	1294	1361	1302	1191	1092	1049
45°	954	1008	1120	1239	1306	1249	1142	1038	987
47.5°	890	949	1064	1178	1235	1187	1083	978	918
50°	829	886	999	1109	1160	1117	1021	909	855
52.5°	759	826	929	1031	1066	1039	948	848	791
55°	692	753	858	932	969	940	877	777	728
57.5°	636	690	783	828	846	835	800	711	664
60°	569	624	695	704	708	719	716	646	597
62.5°	502	560	608	589	570	602	624	579	531
65°	434	493	508	476	434	482	521	509	456
67.5°	375	420	415	351	331	358	432	435	393
70°	309	354	323	276	268	284	327	365	325
72.5°	258	281	251	231	247	234	257	289	266
75°	208	223	199	210	243	212	203	225	214
77.5°	165	171	162	187	202	188	164	173	167
80°	125	129	126	138	155	142	129	131	131
82.5°	91	97	90	94	85	96	92	97	95
85°	59	64	58	59	56	60	62	64	67
87.5°	34	36	36	32	31	34	36	38	40
90°	0	0	0	0	0	0	0	0	0

(END OF REPORT)