

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: P31310

Luminaire Tested: **2GC8-2U158A-UNV-EB81-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: P31310  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 2GC8-2U158A-UNV-EB81-U  
Description: METALUX 2' X 2' SPECIFICATION GRADE RECESSED FLUORESCENT TROFFER  
WITH HIGH REFLECTANCE WHITE INTERIOR FINISH AND ACRYLIC PRISMATIC LENS  
Light Source: (2) MEDIUM BASE BIPIN T8 1-5/8" U-LAMP 3500K  
FBO31/835/XP/ECO  
Ballast/Driver: -  
QTP 2X32T8/UNV ISN-SC

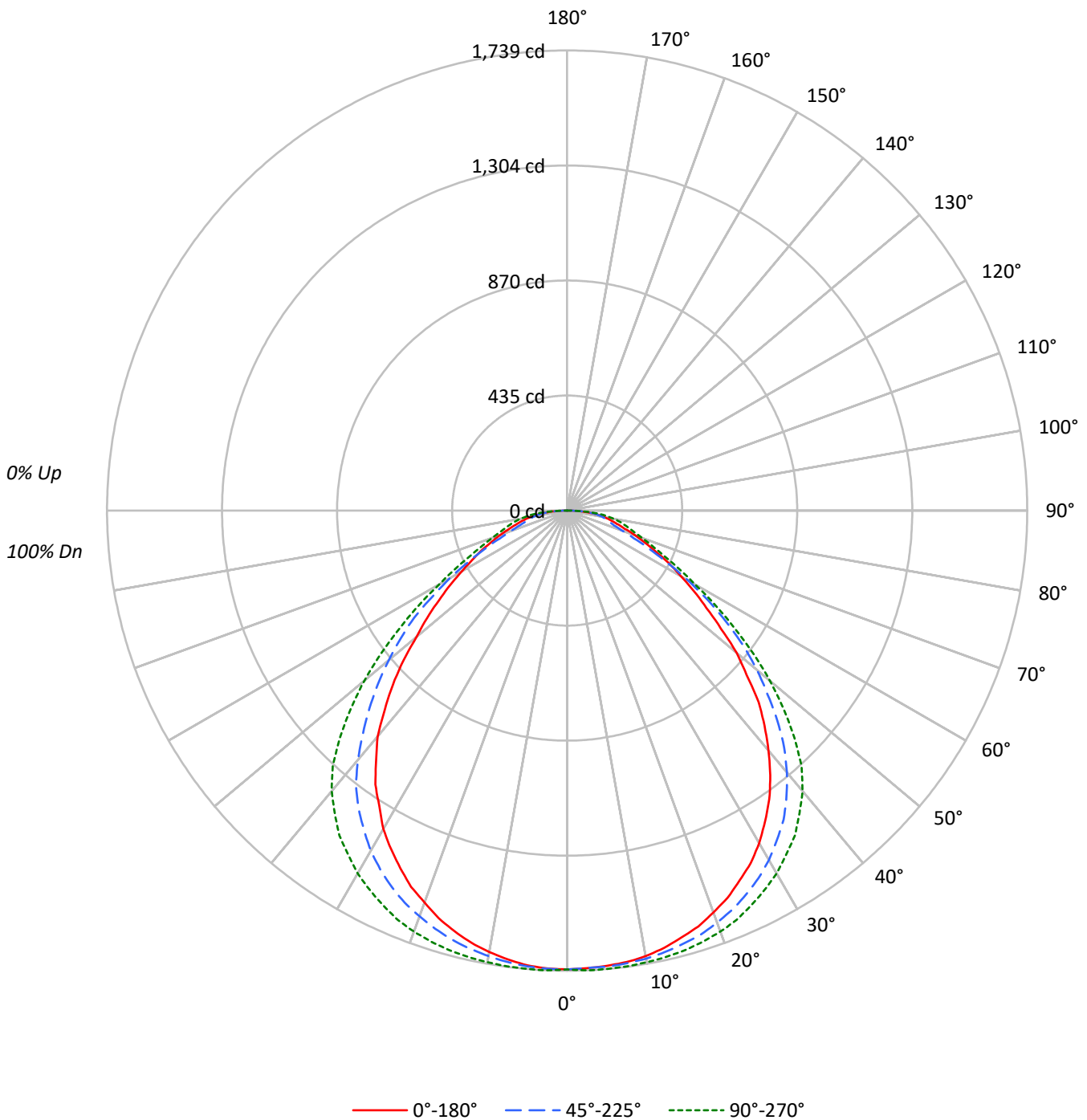
**Summary**

Lumens per Lamp: 2725 (2 lamps)  
Luminaire Lumens: 4377.8 lumens  
Efficiency: 80.3%  
Efficacy: 83.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.35 / 1.35  
Luminous Opening: Rectangular (W 1.77' x L: 1.77' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 52.2  
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: P31310

CATALOG NUMBER: 2GC8-2U158A-UNV-EB81-U

### Luminous Intensity Polar Plot





TEST NUMBER: P31310

CATALOG NUMBER: 2GC8-2U158A-UNV-EB81-U

**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	50	30	10	0	
RCR																						
0	96	96	96	96	93	93	93	93	89	89	89	85	85	85	82	82	82	80				
1	88	84	81	78	86	83	80	77	79	77	75	76	74	72	73	72	70	69				
2	81	74	69	65	79	73	68	64	70	66	63	68	64	61	65	62	60	58				
3	74	66	60	55	72	65	59	54	62	58	54	60	56	53	58	55	52	50				
4	68	59	52	47	66	58	52	47	56	51	46	54	49	46	52	48	45	43				
5	63	53	46	41	61	52	46	41	50	45	40	49	44	40	47	43	40	38				
6	58	48	41	36	57	47	41	36	46	40	36	44	39	35	43	39	35	33				
7	54	44	37	32	53	43	37	32	42	36	32	41	35	32	40	35	31	30				
8	50	40	33	29	49	39	33	29	38	33	29	37	32	28	36	32	28	27				
9	47	37	30	26	46	36	30	26	35	30	26	34	29	26	34	29	26	24				
10	44	34	28	24	43	33	28	24	33	27	23	32	27	23	31	27	23	22				

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

	0°	90°	180°
0°	5952	5952	5952
5°	5951	5992	5944
10°	5960	6040	5904
15°	5935	6112	5849
20°	5903	6184	5757
25°	5840	6234	5647
30°	5751	6274	5505
35°	5582	6286	5292
40°	5305	6202	4992
45°	4971	5893	4524
50°	4464	5345	3968
55°	3848	4602	3537
60°	3412	3831	3158
65°	3021	3265	2908
70°	2740	3001	2700
75°	2586	3103	2599
80°	2827	3519	2807
85°	3151	4214	2954



TEST NUMBER: P31310

CATALOG NUMBER: 2GC8-2U158A-UNV-EB81-U

**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	164.7	3.8	3.0	0°	1734	1734	1734	1734	1734	
10°-20°	476.7	10.9	8.7	5°	1727	1730	1739	1729	1725	164
20°-30°	729.6	16.7	13.4	15°	1670	1695	1720	1679	1646	472
30°-40°	871.6	19.9	16.0	25°	1542	1601	1646	1569	1491	711
40°-50°	838.3	19.1	15.4	35°	1332	1426	1500	1374	1263	830
50°-60°	628.2	14.3	11.5	45°	1024	1124	1214	1056	932	782
60°-70°	368.6	8.4	6.8	55°	643	736	769	706	591	583
70°-80°	210.6	4.8	3.9	65°	372	341	402	343	358	374
80°-90°	89.6	2.0	1.6	75°	195	165	234	162	196	211
90°-100°	0.0	0.0	0.0	85°	80	85	107	73	75	85
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°	1371.1	31.3	25.2							
0°-40°	2242.7	51.2	41.1							
0°-60°	3709.1	84.7	68.1							
0°-90°	4377.8	100.0	80.3							
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°	4377.8	100.0	80.3							



TEST NUMBER: P31310

CATALOG NUMBER: 2GC8-2U158A-UNV-EB81-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1734	1734	1734	1734	1734	1734	1734	1734	1734
2.5°	1731	1731	1730	1735	1739	1737	1733	1733	1732
5°	1727	1728	1730	1735	1739	1735	1729	1725	1725
7.5°	1721	1723	1726	1733	1737	1731	1721	1714	1711
10°	1710	1712	1719	1729	1733	1724	1710	1698	1694
12.5°	1693	1699	1709	1723	1728	1715	1696	1679	1673
15°	1670	1679	1695	1714	1720	1706	1679	1653	1646
17.5°	1648	1657	1680	1702	1708	1689	1657	1627	1615
20°	1616	1630	1657	1686	1693	1672	1632	1595	1576
22.5°	1584	1597	1632	1665	1674	1648	1604	1560	1540
25°	1542	1563	1601	1637	1646	1619	1569	1517	1491
27.5°	1502	1522	1566	1605	1616	1588	1529	1473	1442
30°	1451	1476	1525	1567	1583	1548	1484	1419	1389
32.5°	1392	1423	1476	1523	1541	1502	1430	1360	1322
35°	1332	1367	1426	1477	1500	1452	1374	1297	1263
37.5°	1261	1298	1362	1425	1442	1390	1311	1227	1186
40°	1184	1222	1292	1366	1384	1321	1230	1144	1114
42.5°	1104	1137	1214	1289	1311	1237	1142	1058	1020
45°	1024	1050	1124	1201	1214	1150	1056	969	932
47.5°	920	959	1027	1088	1110	1049	970	876	839
50°	836	858	936	981	1001	945	880	795	743
52.5°	733	769	840	863	885	849	793	711	668
55°	643	671	736	751	769	741	706	624	591
57.5°	569	588	631	640	663	637	601	539	524
60°	497	498	525	543	558	538	513	466	460
62.5°	436	417	428	451	476	457	422	393	404
65°	372	350	341	382	402	389	343	336	358
67.5°	320	293	273	329	346	336	276	286	308
70°	273	252	220	289	299	293	226	248	269
72.5°	228	216	186	255	262	257	189	216	230
75°	195	186	165	223	234	221	162	186	196
77.5°	168	156	149	194	208	192	143	157	169
80°	143	131	135	166	178	161	126	130	142
82.5°	115	104	113	139	146	132	104	101	110
85°	80	78	85	105	107	98	73	75	75
87.5°	46	48	49	61	58	54	43	42	41
90°	0	0	0	0	0	0	0	0	0

(END OF REPORT)