

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: P30415

Luminaire Tested: **ART-2CRK-232-UNV-EB81**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P30415
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: ART-2CRK-232-UNV-EB81
Description: METALUX COMMERCIAL SERIES FLUORESCENT 2X4 RETROFIT KIT
WITH WHITE PAINTED REFLECTOR, EXISTING TROFFER PRISMATIC A LENS AND
DOORFRAME REMAIN, KIT WAS INSTALLED IN A 2GR8 TROFFER HOUSING
Light Source: (2) TWO LINEAR FLUORESCENT LAMPS, F32T8 32W - 2850 LUMENS EA, 3500K
Ballast/Driver: -
GE232MAX-N/ULTRA

Summary

Lumens per Lamp: 2850 (2 lamps)
Luminaire Lumens: 4775.5 lumens
Efficiency: 83.8%
Efficacy: 89.4 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.4 / 1.43
Luminous Opening: Rectangular (W 1.75' x L: 3.79' x H: 0')
CIE Type: Direct

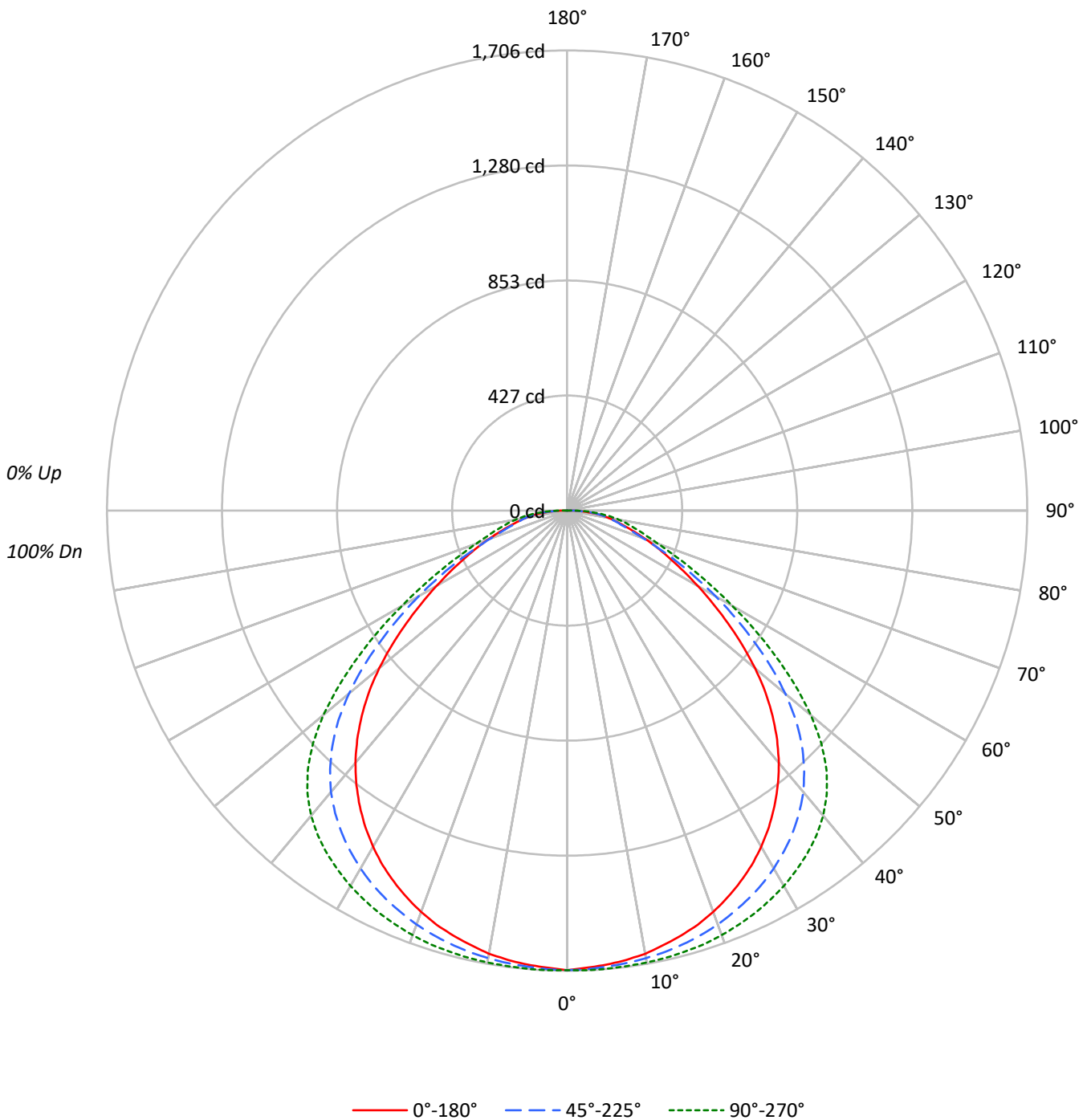
Input Watts (W): 53.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	100	100	100	97	97	97	97	93	93	93	89	89	89	85	85	85	84
1	91	88	84	81	89	86	82	80	82	79	77	79	77	75	76	74	72	71
2	84	77	71	67	81	75	70	66	72	68	64	70	66	63	67	64	61	60
3	76	68	61	56	74	66	60	55	64	59	54	62	57	53	60	56	53	51
4	70	60	53	48	68	59	52	47	57	51	47	55	50	46	53	49	45	44
5	65	54	47	41	63	53	46	41	51	45	40	50	44	40	48	43	40	38
6	60	49	41	36	58	48	41	36	46	40	36	45	39	35	44	39	35	33
7	55	44	37	32	54	43	37	32	42	36	31	41	35	31	40	35	31	29
8	51	40	33	28	50	40	33	28	39	32	28	38	32	28	37	32	28	26
9	48	37	30	26	47	36	30	25	35	30	25	35	29	25	34	29	25	24
10	45	34	27	23	44	34	27	23	33	27	23	32	27	23	31	26	23	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2764	2764	2764
5°	2752	2763	2776
10°	2748	2776	2802
15°	2739	2795	2842
20°	2733	2819	2892
25°	2719	2844	2948
30°	2695	2870	3010
35°	2654	2887	3073
40°	2586	2884	3128
45°	2471	2824	3120
50°	2294	2665	2978
55°	2056	2390	2675
60°	1814	2063	2297
65°	1612	1723	1946
70°	1466	1428	1698
75°	1379	1316	1661
80°	1448	1467	1822
85°	1638	1787	2122



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	161.5	3.4	2.8	0°	1704	1704	1704	1704	1704	
10°-20°	469.9	9.8	8.2	5°	1690	1692	1697	1698	1705	161
20°-30°	731.4	15.3	12.8	15°	1631	1642	1664	1681	1692	461
30°-40°	907.3	19.0	15.9	25°	1519	1542	1589	1629	1647	700
40°-50°	938.8	19.7	16.5	35°	1340	1377	1458	1526	1552	837
50°-60°	748.9	15.7	13.1	45°	1077	1127	1231	1323	1360	828
60°-70°	456.9	9.6	8.0	55°	727	761	845	909	946	652
70°-80°	251.0	5.3	4.4	65°	420	412	449	494	507	421
80°-90°	106.6	2.2	1.9	75°	220	218	210	262	265	237
90°-100°	3.0	0.1	0.1	85°	88	89	96	113	114	86
100°-110°	0.0	0.0	0.0	90°	9	15	22	32	30	9
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°	1362.8	28.5	23.9	165°	0	0	0	0	0	0
0°-40°	2270.2	47.5	39.8	175°	0	0	0	0	0	0
0°-60°	3957.9	82.9	69.4	180°	0	0	0	0	0	0
0°-90°	4772.5	99.9	83.7							
90°-120°	3.0	0.1	0.1							
90°-150°	3.0	0.1	0.1							
90°-180°	3.0	0.1	0.1							
0°-180°	4775.5	100.0	83.8							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1704	1704	1704	1704	1704
2.5°	1696	1698	1702	1701	1706
5°	1690	1692	1697	1698	1705
7.5°	1680	1684	1692	1696	1703
10°	1668	1673	1685	1693	1701
12.5°	1650	1658	1676	1687	1698
15°	1631	1642	1664	1681	1692
17.5°	1610	1622	1650	1673	1686
20°	1583	1599	1633	1661	1675
22.5°	1553	1572	1612	1646	1662
25°	1519	1542	1589	1629	1647
27.5°	1482	1508	1563	1609	1628
30°	1439	1469	1532	1585	1607
32.5°	1392	1425	1497	1557	1581
35°	1340	1377	1458	1526	1552
37.5°	1283	1323	1413	1489	1518
40°	1221	1265	1362	1445	1477
42.5°	1152	1199	1301	1390	1425
45°	1077	1127	1231	1323	1360
47.5°	997	1046	1150	1241	1278
50°	909	956	1056	1142	1180
52.5°	818	860	954	1029	1067
55°	727	761	845	909	946
57.5°	640	664	738	790	826
60°	559	572	636	679	708
62.5°	487	487	538	580	602
65°	420	412	449	494	507
67.5°	362	347	367	419	424
70°	309	295	301	356	358
72.5°	261	254	248	305	306
75°	220	218	210	262	265
77.5°	185	187	182	224	229
80°	155	156	157	189	195
82.5°	125	124	129	154	157
85°	88	89	96	113	114
87.5°	49	51	56	70	70
90°	9	15	22	32	30
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)