

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P276001

Luminaire Tested: **24CZ2-60HE-UNV-L93050-W2A1-U-5000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P276001  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-60HE-UNV-L93050-W2A1-U-5000K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER  
WITH RIBBED LENS  
Light Source: (336) 90 CRI LEDS TUNED TO 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5329.7 lumens  
Efficiency: N/A  
Efficacy: 115.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

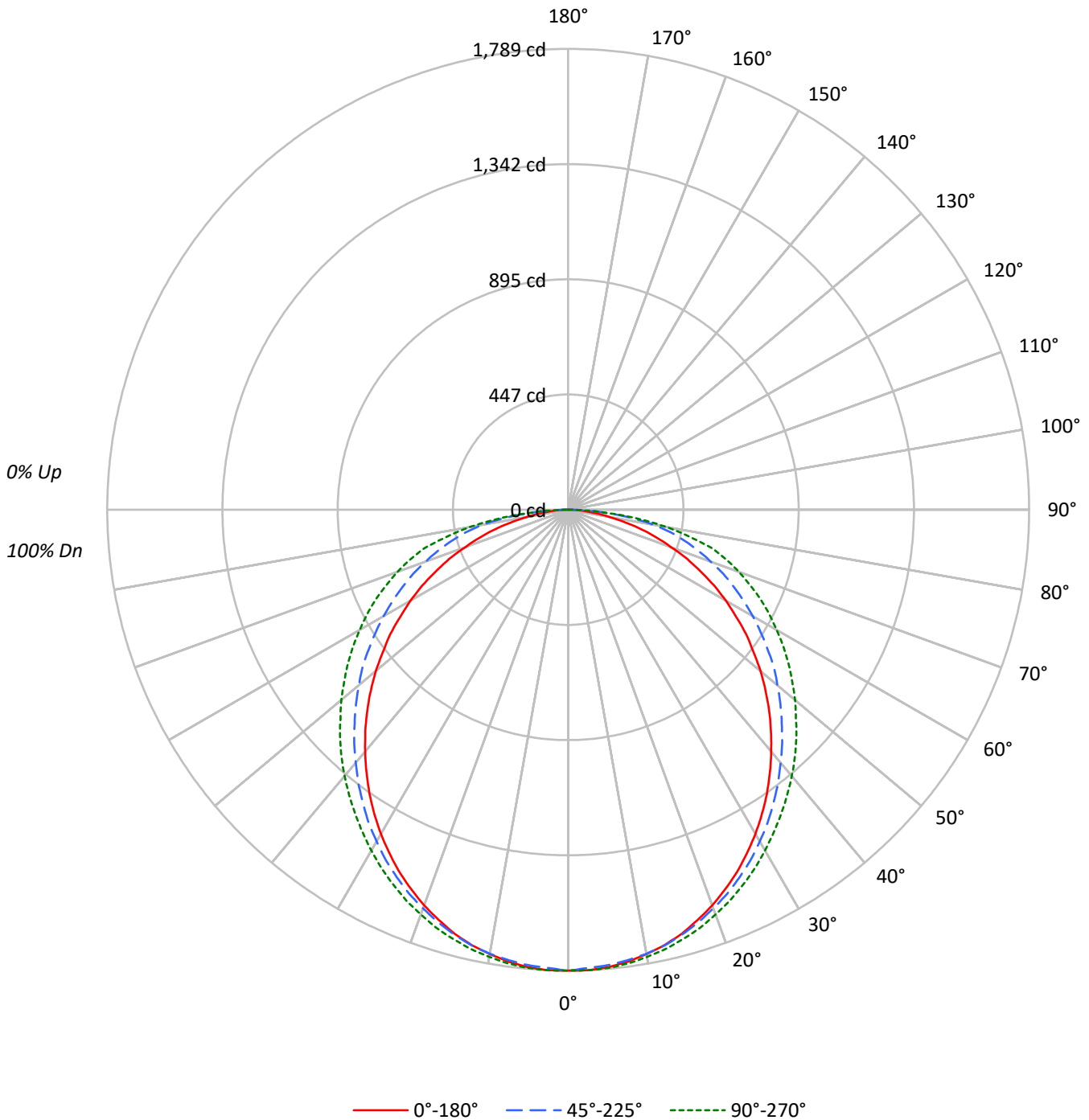
Input Watts (W): 46.127256  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P276001

CATALOG NUMBER: 24CZ2-60HE-UNV-L93050-W2A1-U-5000K

### Luminous Intensity Polar Plot





TEST NUMBER: P276001

CATALOG NUMBER: 24CZ2-60HE-UNV-L93050-W2A1-U-5000K

**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	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	60		68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51		62	56	51		60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39		50	44	38		49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34		46	39	34		45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30		42	35	30		41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27		39	32	27		38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25		36	29	25		35	29	25	23

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

	0°	45°	90°
0°	2408	2408	2408
5°	2407	2398	2412
10°	2394	2391	2408
15°	2374	2379	2403
20°	2341	2358	2394
25°	2303	2337	2385
30°	2258	2310	2374
35°	2209	2282	2367
40°	2153	2253	2371
45°	2098	2230	2383
50°	2040	2219	2405
55°	1978	2216	2449
60°	1900	2226	2513
65°	1801	2259	2622
70°	1672	2316	2771
75°	1526	2432	3005
80°	1254	2619	3005
85°	962	2416	2581



TEST NUMBER: P276001

CATALOG NUMBER: 24CZ2-60HE-UNV-L93050-W2A1-U-5000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	169.2	3.2
10°-20°	483.2	9.1
20°-30°	727.1	13.6
30°-40°	871.3	16.3
40°-50°	908.0	17.0
50°-60°	844.8	15.9
60°-70°	695.8	13.1
70°-80°	473.9	8.9
80°-90°	156.4	2.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1379.5	25.9
0°-40°	2250.8	42.2
0°-60°	4003.6	75.1
0°-90°	5329.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5329.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1789	1789	1789	1789	1789	
5°	1782	1782	1775	1784	1786	169
15°	1704	1706	1708	1724	1725	480
25°	1551	1558	1574	1601	1606	714
35°	1345	1361	1389	1427	1441	841
45°	1103	1126	1172	1231	1252	851
55°	843	872	944	1019	1044	752
65°	566	614	710	793	824	561
75°	294	359	468	551	578	309
85°	62	121	156	167	167	77
90°	0	0	0	0	0	



TEST NUMBER: P276001

CATALOG NUMBER: 24CZ2-60HE-UNV-L93050-W2A1-U-5000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1789.4	1789.4	1789.4	1789.4	1789.4
2.5°	1789.4	1789.4	1780.5	1789.4	1789.4
5°	1782.3	1782.3	1775.2	1784.1	1785.9
7.5°	1769.8	1771.6	1764.5	1775.2	1777.0
10°	1752.1	1753.8	1750.3	1761.0	1762.7
12.5°	1730.7	1732.5	1732.5	1744.9	1746.7
15°	1704.0	1705.8	1707.6	1723.6	1725.4
17.5°	1670.2	1675.6	1679.1	1698.7	1702.3
20°	1634.7	1640.0	1647.1	1668.5	1672.0
22.5°	1593.8	1600.9	1613.3	1636.4	1641.8
25°	1551.1	1558.2	1574.2	1600.9	1606.2
27.5°	1503.0	1513.7	1533.3	1561.7	1568.9
30°	1453.2	1463.9	1487.0	1517.3	1527.9
32.5°	1399.9	1414.1	1440.8	1474.6	1485.2
35°	1344.7	1360.7	1389.2	1426.6	1440.8
37.5°	1286.0	1303.8	1337.6	1378.5	1396.3
40°	1225.6	1246.9	1282.5	1330.5	1350.1
42.5°	1165.1	1184.6	1229.1	1280.7	1302.0
45°	1102.8	1125.9	1172.2	1230.9	1252.2
47.5°	1038.8	1061.9	1117.0	1179.3	1198.9
50°	974.8	997.9	1060.1	1125.9	1149.1
52.5°	905.4	935.6	1006.8	1072.6	1095.7
55°	843.1	871.6	944.5	1019.2	1044.1
57.5°	772.0	805.8	885.8	964.1	990.8
60°	706.2	741.7	827.1	907.2	933.8
62.5°	638.6	677.7	768.4	850.2	880.5
65°	565.6	613.7	709.7	793.3	823.6
67.5°	499.8	549.6	651.0	736.4	763.1
70°	425.1	485.6	588.8	674.1	704.4
72.5°	361.1	421.6	530.1	613.7	643.9
75°	293.5	359.3	467.8	551.4	578.1
77.5°	225.9	298.8	407.3	471.4	480.3
80°	161.9	238.4	338.0	375.3	387.8
82.5°	113.8	183.2	249.0	273.9	281.0
85°	62.3	121.0	156.5	167.2	167.2
87.5°	26.7	51.6	62.3	64.0	65.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)