

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: P260987

Luminaire Tested: **24CZ-LD5-45-S-UNV-L83050-W2A1-U-3000K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P260987  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25694)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-45-S-UNV-L83050-W2A1-U-3000K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (336) 80 CRI LEDS TUNED AT 3000K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4323.0 lumens  
Efficiency: N/A  
Efficacy: 137.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

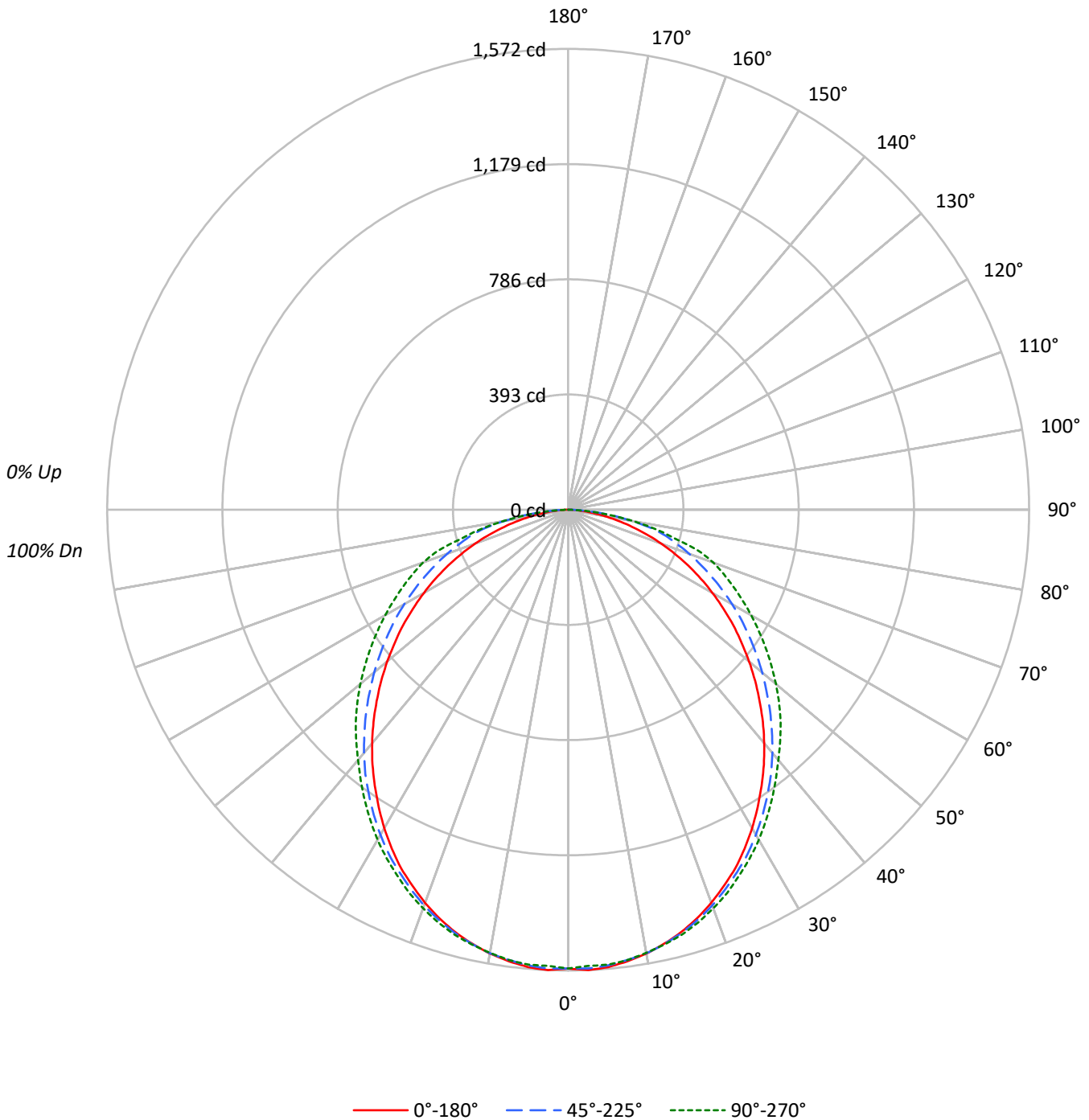
Input Watts (W): 31.371132  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P260987

CATALOG NUMBER: 24CZ-LD5-45-S-UNV-L83050-W2A1-U-3000K

### Luminous Intensity Polar Plot





TEST NUMBER: P260987

CATALOG NUMBER: 24CZ-LD5-45-S-UNV-L83050-W2A1-U-3000K

**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	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56	52	50
5	76	63	53	47	73	61	53	47	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	2106	2106	2106
5°	2116	2108	2104
10°	2101	2099	2097
15°	2078	2082	2090
20°	2043	2058	2072
25°	2003	2024	2046
30°	1949	1989	2020
35°	1888	1947	1987
40°	1827	1902	1958
45°	1757	1853	1949
50°	1686	1807	1936
55°	1613	1768	1930
60°	1529	1738	1939
65°	1438	1717	1978
70°	1324	1726	2071
75°	1174	1787	1929
80°	981	1694	1739
85°	733	1354	1244



TEST NUMBER: P260987

CATALOG NUMBER: 24CZ-LD5-45-S-UNV-L83050-W2A1-U-3000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	148.0	3.4
10°-20°	420.8	9.7
20°-30°	627.1	14.5
30°-40°	738.2	17.1
40°-50°	750.2	17.4
50°-60°	674.5	15.6
60°-70°	532.9	12.3
70°-80°	338.0	7.8
80°-90°	93.3	2.2
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°	1195.9	27.7
0°-40°	1934.1	44.7
0°-60°	3358.8	77.7
0°-90°	4323.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4323.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1565	1565	1565	1565	1565	
5°	1566	1554	1561	1558	1558	149
15°	1492	1484	1494	1499	1500	420
25°	1349	1348	1364	1372	1378	620
35°	1149	1156	1185	1198	1210	719
45°	924	936	974	1003	1024	713
55°	688	705	754	803	823	614
65°	452	475	539	598	621	447
75°	226	265	344	374	371	240
85°	48	82	88	81	81	58
90°	0	0	0	0	0	



TEST NUMBER: P260987

CATALOG NUMBER: 24CZ-LD5-45-S-UNV-L83050-W2A1-U-3000K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1565.0	1565.0	1565.0	1565.0	1565.0
2.5°	1572.2	1560.7	1566.4	1563.6	1557.8
5°	1566.4	1553.5	1560.7	1557.8	1557.8
7.5°	1553.5	1543.4	1549.2	1547.7	1549.2
10°	1537.7	1527.6	1536.2	1536.2	1534.8
12.5°	1516.1	1507.5	1517.5	1517.5	1519.0
15°	1491.6	1484.5	1494.5	1498.8	1500.3
17.5°	1461.4	1454.2	1467.2	1471.5	1475.8
20°	1426.9	1424.0	1437.0	1441.3	1447.1
22.5°	1388.1	1388.1	1401.0	1406.8	1415.4
25°	1349.2	1347.8	1363.6	1372.3	1378.0
27.5°	1303.2	1304.7	1324.8	1333.4	1340.6
30°	1254.3	1257.2	1280.2	1290.3	1300.3
32.5°	1202.5	1208.3	1234.2	1245.7	1255.7
35°	1149.3	1156.5	1185.3	1198.2	1209.7
37.5°	1096.1	1106.1	1136.4	1149.3	1162.2
40°	1040.0	1048.6	1083.1	1099.0	1114.8
42.5°	982.4	994.0	1028.5	1051.5	1070.2
45°	923.5	936.4	973.8	1002.6	1024.2
47.5°	864.5	881.8	917.7	956.6	975.3
50°	805.5	822.8	863.1	906.2	924.9
52.5°	745.1	762.4	808.4	853.0	873.1
55°	687.6	704.8	753.7	802.6	822.8
57.5°	627.2	645.9	700.5	750.9	771.0
60°	568.2	586.9	645.9	699.1	720.7
62.5°	510.6	530.8	592.6	648.7	670.3
65°	451.7	474.7	539.4	598.4	621.4
67.5°	394.1	420.0	487.6	549.5	573.9
70°	336.6	366.8	438.7	502.0	526.5
72.5°	280.5	313.6	389.8	453.1	466.0
75°	225.8	264.7	343.8	374.0	371.1
77.5°	174.0	217.2	292.0	297.8	306.4
80°	126.6	174.0	218.6	230.1	224.4
82.5°	83.4	130.9	156.8	151.0	149.6
85°	47.5	82.0	87.7	80.6	80.6
87.5°	20.1	33.1	28.8	21.6	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)