

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: P260695

Luminaire Tested: **24CZ-LD5-45SE-UNV-L93050-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P260695  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25697)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-45SE-UNV-L93050-W2A1-U-4500K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER WITH RIBBED LENS  
Light Source: (168) 90 CRI LEDS TUNED AT 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4232.9 lumens  
Efficiency: N/A  
Efficacy: 116.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

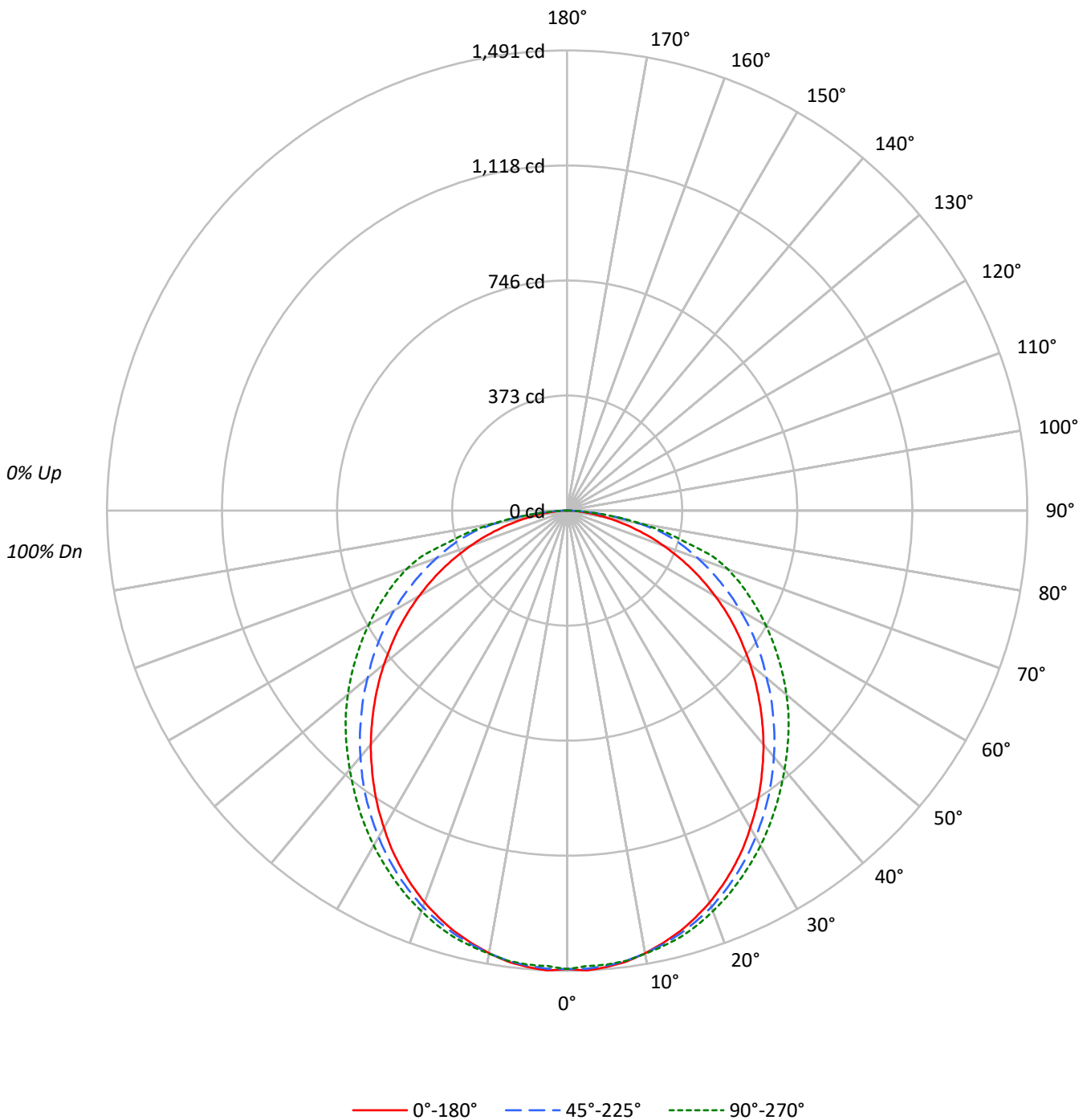
Input Watts (W): 36.436656  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P260695

CATALOG NUMBER: 24CZ-LD5-45SE-UNV-L93050-W2A1-U-4500K

### Luminous Intensity Polar Plot





TEST NUMBER: P260695

CATALOG NUMBER: 24CZ-LD5-45SE-UNV-L93050-W2A1-U-4500K

**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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	60	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	35	32
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29
9	56	42	34	28	54	42	34	28	41	33	28	40	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	31	26	37	30	25	36	30	25	24

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

	0°	45°	90°
0°	1999	1999	1999
5°	2004	1999	1995
10°	1990	1990	1992
15°	1966	1976	1991
20°	1934	1957	1978
25°	1893	1930	1962
30°	1844	1898	1948
35°	1793	1866	1933
40°	1739	1830	1925
45°	1679	1795	1930
50°	1620	1766	1941
55°	1560	1754	1962
60°	1490	1743	2001
65°	1412	1744	2067
70°	1306	1773	2178
75°	1168	1853	2072
80°	977	1774	1898
85°	738	1365	1298



TEST NUMBER: P260695

CATALOG NUMBER: 24CZ-LD5-45SE-UNV-L93050-W2A1-U-4500K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.4	3.3
10°-20°	399.5	9.4
20°-30°	597.3	14.1
30°-40°	708.6	16.7
40°-50°	729.3	17.2
50°-60°	669.0	15.8
60°-70°	540.9	12.8
70°-80°	351.1	8.3
80°-90°	96.8	2.3
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°	1137.2	26.9
0°-40°	1845.7	43.6
0°-60°	3244.1	76.6
0°-90°	4232.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4232.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1486	1486	1486	1486	1486	
5°	1484	1474	1480	1478	1477	141
15°	1412	1406	1419	1425	1429	398
25°	1275	1277	1300	1312	1322	587
35°	1091	1100	1136	1161	1177	682
45°	883	897	944	988	1014	681
55°	665	686	748	809	836	594
65°	444	470	548	620	649	438
75°	225	267	356	399	399	239
85°	48	81	88	86	84	59
90°	0	0	0	0	0	



TEST NUMBER: P260695

CATALOG NUMBER: 24CZ-LD5-45SE-UNV-L93050-W2A1-U-4500K

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1485.5	1485.5	1485.5	1485.5	1485.5
2.5°	1491.3	1479.7	1485.5	1484.1	1476.8
5°	1484.1	1473.9	1479.7	1478.3	1476.8
7.5°	1473.9	1463.8	1471.0	1469.6	1471.0
10°	1456.5	1447.8	1456.5	1458.0	1458.0
12.5°	1434.8	1427.6	1439.1	1442.0	1444.9
15°	1411.6	1405.8	1418.9	1424.7	1429.0
17.5°	1382.6	1378.3	1394.2	1401.5	1407.3
20°	1350.7	1349.3	1366.7	1373.9	1381.2
22.5°	1314.5	1314.5	1334.8	1343.5	1353.6
25°	1275.4	1276.8	1300.0	1311.6	1321.8
27.5°	1233.3	1234.8	1262.3	1276.8	1288.4
30°	1187.0	1192.8	1221.8	1240.6	1253.6
32.5°	1140.6	1147.8	1179.7	1201.5	1216.0
35°	1091.3	1100.0	1136.2	1160.9	1176.8
37.5°	1040.6	1050.7	1089.9	1117.4	1136.2
40°	989.9	1001.5	1042.0	1073.9	1095.7
42.5°	936.2	949.3	994.2	1031.9	1055.1
45°	882.6	897.1	943.5	988.4	1014.5
47.5°	829.0	846.4	895.7	944.9	972.5
50°	773.9	791.3	843.5	900.0	927.5
52.5°	718.8	739.1	797.1	855.1	882.6
55°	665.2	685.5	747.8	808.7	836.2
57.5°	610.2	630.4	698.6	762.3	789.9
60°	553.6	576.8	647.8	713.1	743.5
62.5°	498.6	523.2	598.6	668.1	697.1
65°	443.5	469.6	547.8	620.3	649.3
67.5°	387.0	417.4	498.6	572.5	602.9
70°	331.9	365.2	450.7	524.6	553.6
72.5°	278.3	314.5	402.9	478.3	495.7
75°	224.6	266.7	356.5	398.6	398.6
77.5°	173.9	220.3	304.4	320.3	329.0
80°	126.1	176.8	229.0	247.8	244.9
82.5°	84.1	134.8	163.8	163.8	159.4
85°	47.8	81.2	88.4	85.5	84.1
87.5°	20.3	30.4	27.5	21.7	18.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)