

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: P261040

Luminaire Tested: **24CZ-LD5-45SE-S-UNV-L83050-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P261040  
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-LD5-45SE-S-UNV-L83050-W2A1-U-4500K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER  
WITH SMOOTH LENS  
Light Source: (168) 80 CRI LEDS TUNED AT 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4900.0 lumens  
Efficiency: N/A  
Efficacy: 133.6 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

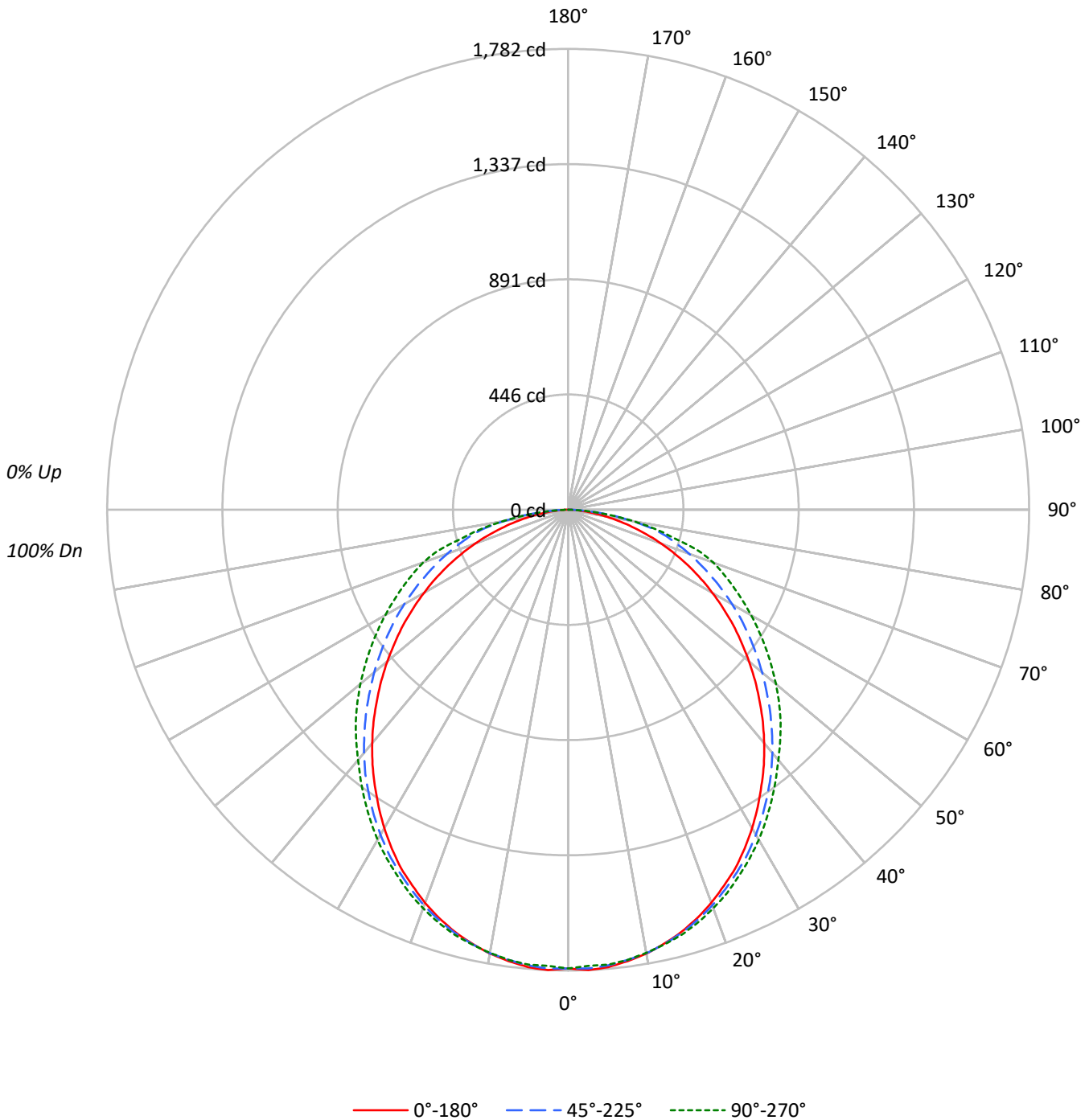
Input Watts (W): 36.681432  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	2387	2387	2387
5°	2398	2389	2385
10°	2381	2379	2377
15°	2355	2360	2369
20°	2316	2332	2349
25°	2270	2295	2319
30°	2209	2254	2290
35°	2140	2207	2252
40°	2070	2156	2219
45°	1992	2100	2209
50°	1911	2048	2195
55°	1828	2004	2188
60°	1733	1970	2198
65°	1630	1947	2242
70°	1501	1956	2347
75°	1331	2026	2187
80°	1112	1920	1970
85°	831	1536	1409



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	167.7	3.4
10°-20°	477.0	9.7
20°-30°	710.8	14.5
30°-40°	836.8	17.1
40°-50°	850.3	17.4
50°-60°	764.5	15.6
60°-70°	604.0	12.3
70°-80°	383.2	7.8
80°-90°	105.8	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°	1355.5	27.7
0°-40°	2192.3	44.7
0°-60°	3807.1	77.7
0°-90°	4900.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4900.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1774	1774	1774	1774	1774	
5°	1776	1761	1769	1766	1766	168
15°	1691	1683	1694	1699	1700	476
25°	1529	1528	1546	1555	1562	703
35°	1303	1311	1344	1358	1371	815
45°	1047	1061	1104	1136	1161	808
55°	779	799	854	910	933	696
65°	512	538	611	678	704	507
75°	256	300	390	424	421	272
85°	54	93	100	91	91	66
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1773.9	1773.9	1773.9	1773.9	1773.9
2.5°	1782.0	1769.0	1775.5	1772.3	1765.7
5°	1775.5	1760.8	1769.0	1765.7	1765.7
7.5°	1760.8	1749.4	1756.0	1754.3	1756.0
10°	1742.9	1731.5	1741.3	1741.3	1739.7
12.5°	1718.5	1708.7	1720.1	1720.1	1721.7
15°	1690.7	1682.6	1694.0	1698.9	1700.5
17.5°	1656.5	1648.3	1663.0	1667.9	1672.8
20°	1617.4	1614.1	1628.8	1633.7	1640.2
22.5°	1573.3	1573.3	1588.0	1594.5	1604.3
25°	1529.3	1527.7	1545.6	1555.4	1561.9
27.5°	1477.2	1478.8	1501.6	1511.4	1519.5
30°	1421.7	1425.0	1451.1	1462.5	1473.9
32.5°	1363.0	1369.5	1398.9	1411.9	1423.4
35°	1302.7	1310.9	1343.5	1358.1	1371.2
37.5°	1242.4	1253.8	1288.0	1302.7	1317.4
40°	1178.8	1188.6	1227.7	1245.6	1263.6
42.5°	1113.6	1126.6	1165.7	1191.8	1213.0
45°	1046.7	1061.4	1103.8	1136.4	1160.9
47.5°	979.9	999.4	1040.2	1084.2	1105.4
50°	913.0	932.6	978.2	1027.2	1048.4
52.5°	844.6	864.1	916.3	966.8	989.7
55°	779.3	798.9	854.3	909.8	932.6
57.5°	710.9	732.1	794.0	851.1	873.9
60°	644.0	665.2	732.1	792.4	816.8
62.5°	578.8	601.6	671.7	735.3	759.8
65°	511.9	538.0	611.4	678.3	704.3
67.5°	446.7	476.1	552.7	622.8	650.5
70°	381.5	415.8	497.3	569.0	596.7
72.5°	317.9	355.4	441.8	513.6	528.3
75°	256.0	300.0	389.7	423.9	420.6
77.5°	197.3	246.2	331.0	337.5	347.3
80°	143.5	197.3	247.8	260.9	254.3
82.5°	94.6	148.4	177.7	171.2	169.6
85°	53.8	92.9	99.5	91.3	91.3
87.5°	22.8	37.5	32.6	24.5	22.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)