

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: P230081

Luminaire Tested: **24CZ-LD5-45SE-S-UNV-L935-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P230081  
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-L935-CD1-U  
Description: CRUZE 2x4 LED TROFFER  
WITH SMOOTH LENS  
Light Source: (84) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4015.0 lumens  
Efficiency: N/A  
Efficacy: 100.6 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

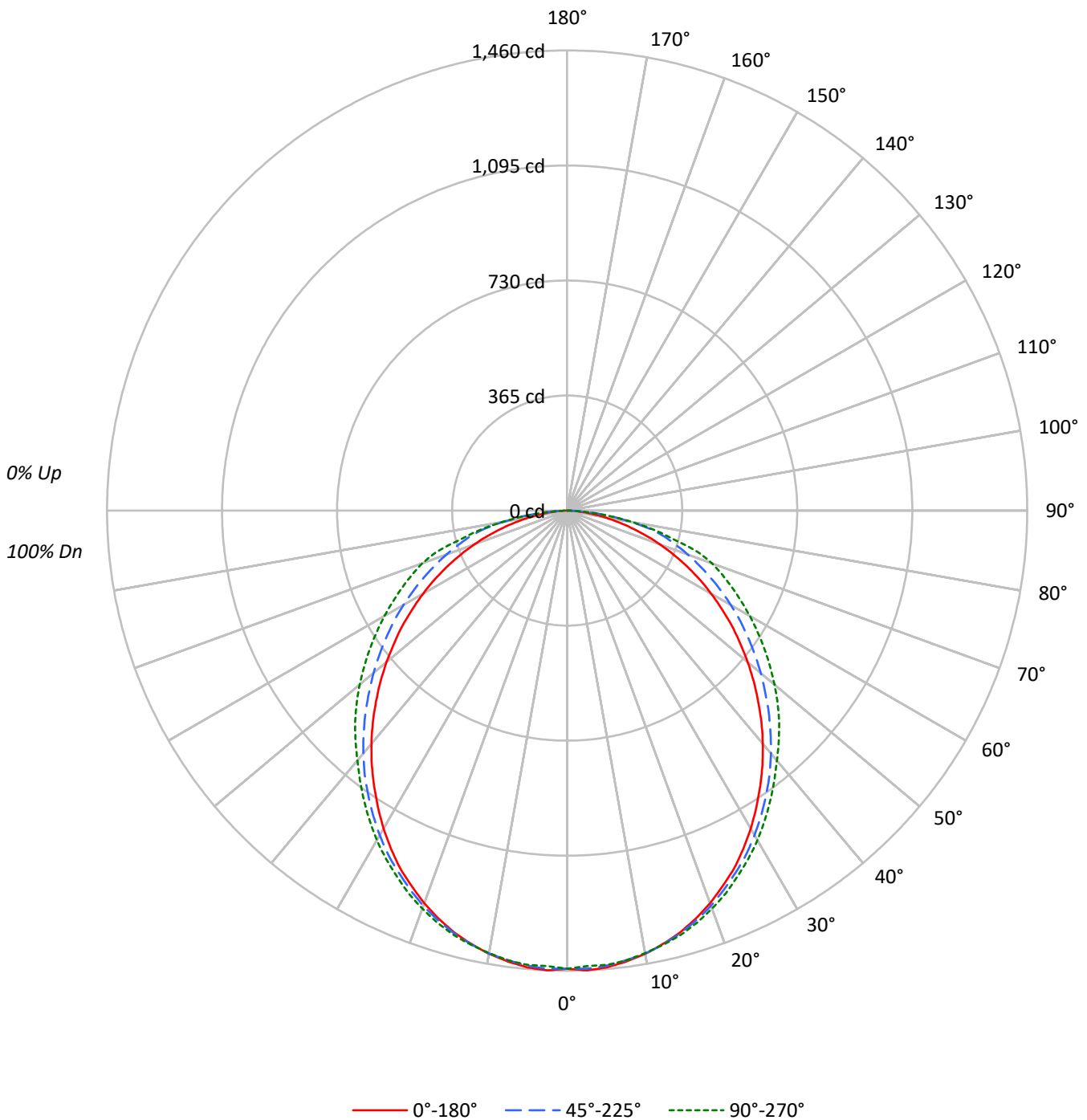
Input Watts (W): 39.91  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1956	1956	1956
5°	1965	1958	1954
10°	1951	1949	1947
15°	1930	1933	1941
20°	1898	1911	1924
25°	1860	1880	1900
30°	1810	1847	1876
35°	1753	1808	1845
40°	1697	1767	1819
45°	1632	1721	1810
50°	1566	1678	1798
55°	1498	1642	1793
60°	1420	1614	1801
65°	1336	1595	1837
70°	1230	1603	1924
75°	1090	1660	1792
80°	911	1574	1615
85°	681	1258	1155



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	137.4	3.4
10°-20°	390.8	9.7
20°-30°	582.4	14.5
30°-40°	685.6	17.1
40°-50°	696.7	17.4
50°-60°	626.4	15.6
60°-70°	494.9	12.3
70°-80°	313.9	7.8
80°-90°	86.6	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°	1110.7	27.7
0°-40°	1796.3	44.7
0°-60°	3119.5	77.7
0°-90°	4015.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4015.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1454	1454	1454	1454	1454	
5°	1455	1443	1450	1447	1447	138
15°	1385	1379	1388	1392	1393	390
25°	1253	1252	1266	1274	1280	576
35°	1067	1074	1101	1113	1124	668
45°	858	870	904	931	951	662
55°	639	655	700	746	764	570
65°	420	441	501	556	577	416
75°	210	246	319	347	345	223
85°	44	76	82	75	75	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1453.5	1453.5	1453.5	1453.5	1453.5
2.5°	1460.2	1449.5	1454.8	1452.2	1446.8
5°	1454.8	1442.8	1449.5	1446.8	1446.8
7.5°	1442.8	1433.5	1438.8	1437.5	1438.8
10°	1428.1	1418.8	1426.8	1426.8	1425.4
12.5°	1408.1	1400.1	1409.4	1409.4	1410.8
15°	1385.4	1378.7	1388.0	1392.1	1393.4
17.5°	1357.3	1350.6	1362.7	1366.7	1370.7
20°	1325.3	1322.6	1334.6	1338.6	1344.0
22.5°	1289.2	1289.2	1301.2	1306.6	1314.6
25°	1253.1	1251.8	1266.5	1274.5	1279.8
27.5°	1210.4	1211.7	1230.4	1238.4	1245.1
30°	1164.9	1167.6	1189.0	1198.3	1207.7
32.5°	1116.8	1122.2	1146.2	1156.9	1166.3
35°	1067.4	1074.1	1100.8	1112.8	1123.5
37.5°	1018.0	1027.3	1055.4	1067.4	1079.4
40°	965.9	973.9	1006.0	1020.7	1035.4
42.5°	912.4	923.1	955.2	976.6	993.9
45°	857.7	869.7	904.4	931.2	951.2
47.5°	802.9	818.9	852.3	888.4	905.8
50°	748.1	764.2	801.6	841.6	859.0
52.5°	692.0	708.0	750.8	792.2	810.9
55°	638.6	654.6	700.0	745.5	764.2
57.5°	582.5	599.8	650.6	697.4	716.1
60°	527.7	545.1	599.8	649.3	669.3
62.5°	474.3	493.0	550.4	602.5	622.5
65°	419.5	440.9	501.0	555.8	577.1
67.5°	366.0	390.1	452.9	510.3	533.0
70°	312.6	340.7	407.5	466.2	489.0
72.5°	260.5	291.2	362.0	420.8	432.8
75°	209.7	245.8	319.3	347.3	344.7
77.5°	161.6	201.7	271.2	276.5	284.6
80°	117.6	161.6	203.1	213.8	208.4
82.5°	77.5	121.6	145.6	140.3	138.9
85°	44.1	76.1	81.5	74.8	74.8
87.5°	18.7	30.7	26.7	20.0	18.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)