

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: P388922

Luminaire Tested: **24CZ2-65VHE-UNV-L935-CD1-U**

Issue Date: 2/28/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P388922  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-65VHE-UNV-L935-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

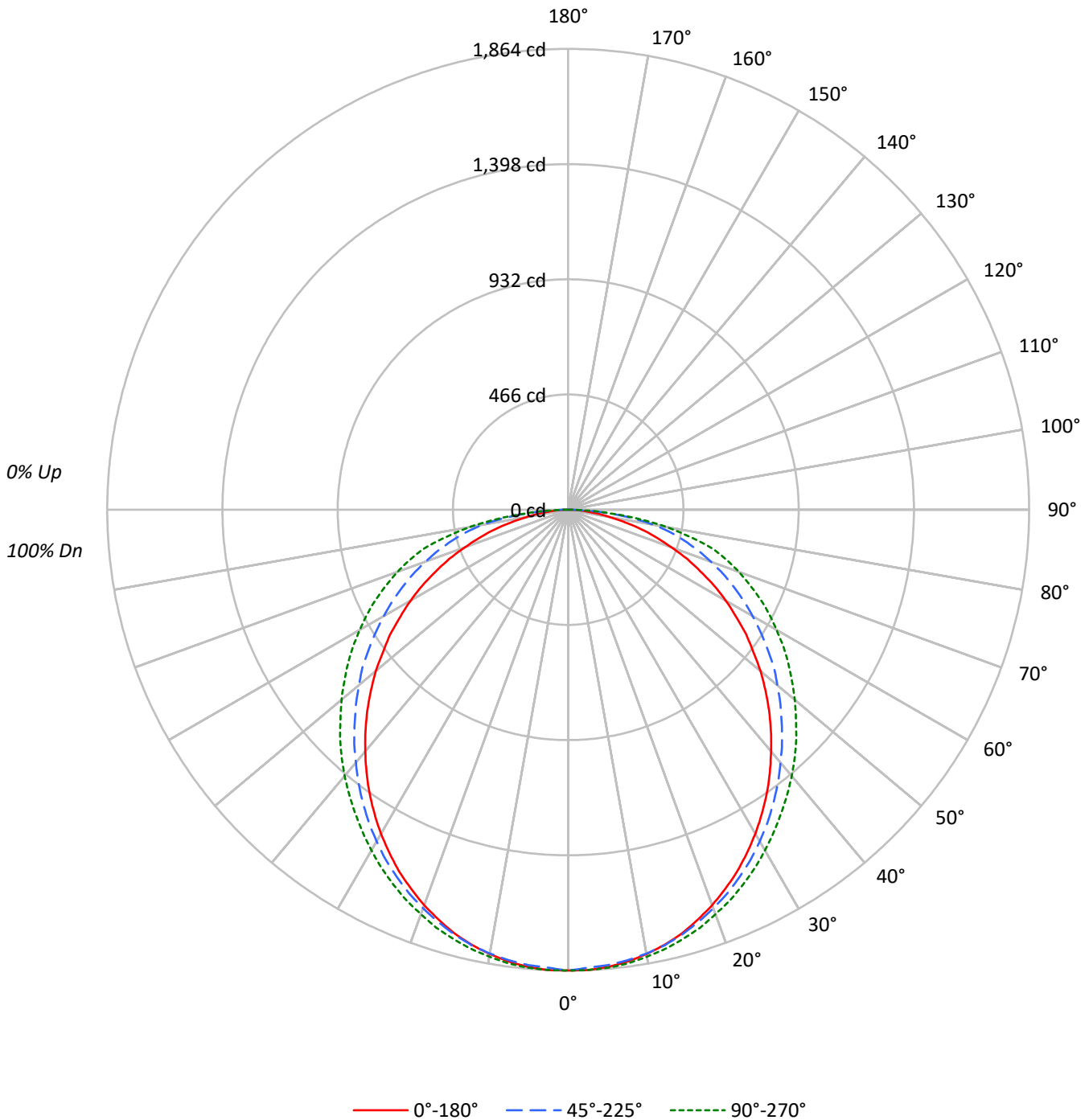
Lumens per Lamp: N/A  
Luminaire Lumens: 5550.6 lumens  
Efficiency: N/A  
Efficacy: 131.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 42.2  
Input Voltage (V): NR  
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	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°	2507	2507	2507
5°	2507	2497	2512
10°	2493	2490	2508
15°	2472	2477	2503
20°	2438	2456	2493
25°	2398	2434	2483
30°	2351	2406	2472
35°	2300	2376	2465
40°	2242	2346	2470
45°	2185	2323	2481
50°	2125	2311	2505
55°	2060	2308	2551
60°	1979	2318	2617
65°	1876	2353	2731
70°	1742	2412	2886
75°	1589	2533	3130
80°	1306	2727	3129
85°	1000	2516	2688



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	176.3	3.2
10°-20°	503.2	9.1
20°-30°	757.2	13.6
30°-40°	907.4	16.3
40°-50°	945.6	17.0
50°-60°	879.8	15.9
60°-70°	724.6	13.1
70°-80°	493.5	8.9
80°-90°	162.9	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°	1436.6	25.9
0°-40°	2344.1	42.2
0°-60°	4169.5	75.1
0°-90°	5550.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5550.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1864	1864	1864	1864	1864	
5°	1856	1856	1849	1858	1860	176
15°	1775	1776	1778	1795	1797	500
25°	1615	1623	1639	1667	1673	744
35°	1400	1417	1447	1486	1500	875
45°	1148	1173	1221	1282	1304	886
55°	878	908	984	1062	1087	783
65°	589	639	739	826	858	585
75°	306	374	487	574	602	322
85°	65	126	163	174	174	80
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1863.6	1863.6	1863.6	1863.6	1863.6
2.5°	1863.6	1863.6	1854.3	1863.6	1863.6
5°	1856.2	1856.2	1848.8	1858.0	1859.9
7.5°	1843.2	1845.1	1837.7	1848.8	1850.6
10°	1824.7	1826.5	1822.8	1834.0	1835.8
12.5°	1802.5	1804.3	1804.3	1817.3	1819.1
15°	1774.7	1776.5	1778.4	1795.1	1796.9
17.5°	1739.5	1745.0	1748.7	1769.1	1772.8
20°	1702.4	1708.0	1715.4	1737.6	1741.3
22.5°	1659.8	1667.2	1680.2	1704.3	1709.8
25°	1615.4	1622.8	1639.4	1667.2	1672.8
27.5°	1565.3	1576.5	1596.8	1626.5	1633.9
30°	1513.5	1524.6	1548.7	1580.2	1591.3
32.5°	1457.9	1472.7	1500.5	1535.7	1546.8
35°	1400.5	1417.1	1446.8	1485.7	1500.5
37.5°	1339.3	1357.9	1393.1	1435.7	1454.2
40°	1276.4	1298.6	1335.6	1385.7	1406.0
42.5°	1213.4	1233.8	1280.1	1333.8	1356.0
45°	1148.5	1172.6	1220.8	1281.9	1304.1
47.5°	1081.8	1105.9	1163.4	1228.2	1248.6
50°	1015.2	1039.2	1104.1	1172.6	1196.7
52.5°	942.9	974.4	1048.5	1117.0	1141.1
55°	878.1	907.7	983.7	1061.5	1087.4
57.5°	804.0	839.2	922.5	1004.0	1031.8
60°	735.4	772.5	861.4	944.8	972.6
62.5°	665.0	705.8	800.3	885.5	917.0
65°	589.1	639.1	739.1	826.2	857.7
67.5°	520.5	572.4	678.0	766.9	794.7
70°	442.7	505.7	613.2	702.1	733.6
72.5°	376.1	439.0	552.0	639.1	670.6
75°	305.7	374.2	487.2	574.3	602.1
77.5°	235.3	311.2	424.2	490.9	500.2
80°	168.6	248.2	352.0	390.9	403.8
82.5°	118.6	190.8	259.3	285.3	292.7
85°	64.8	126.0	163.0	174.1	174.1
87.5°	27.8	53.7	64.8	66.7	68.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)