

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: P388926

Luminaire Tested: **24CZ2-65VHE-UNV-L950-CD1-SDWPD1-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: P388926  
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-L950-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5807.8 lumens  
Efficiency: N/A  
Efficacy: 137.6 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

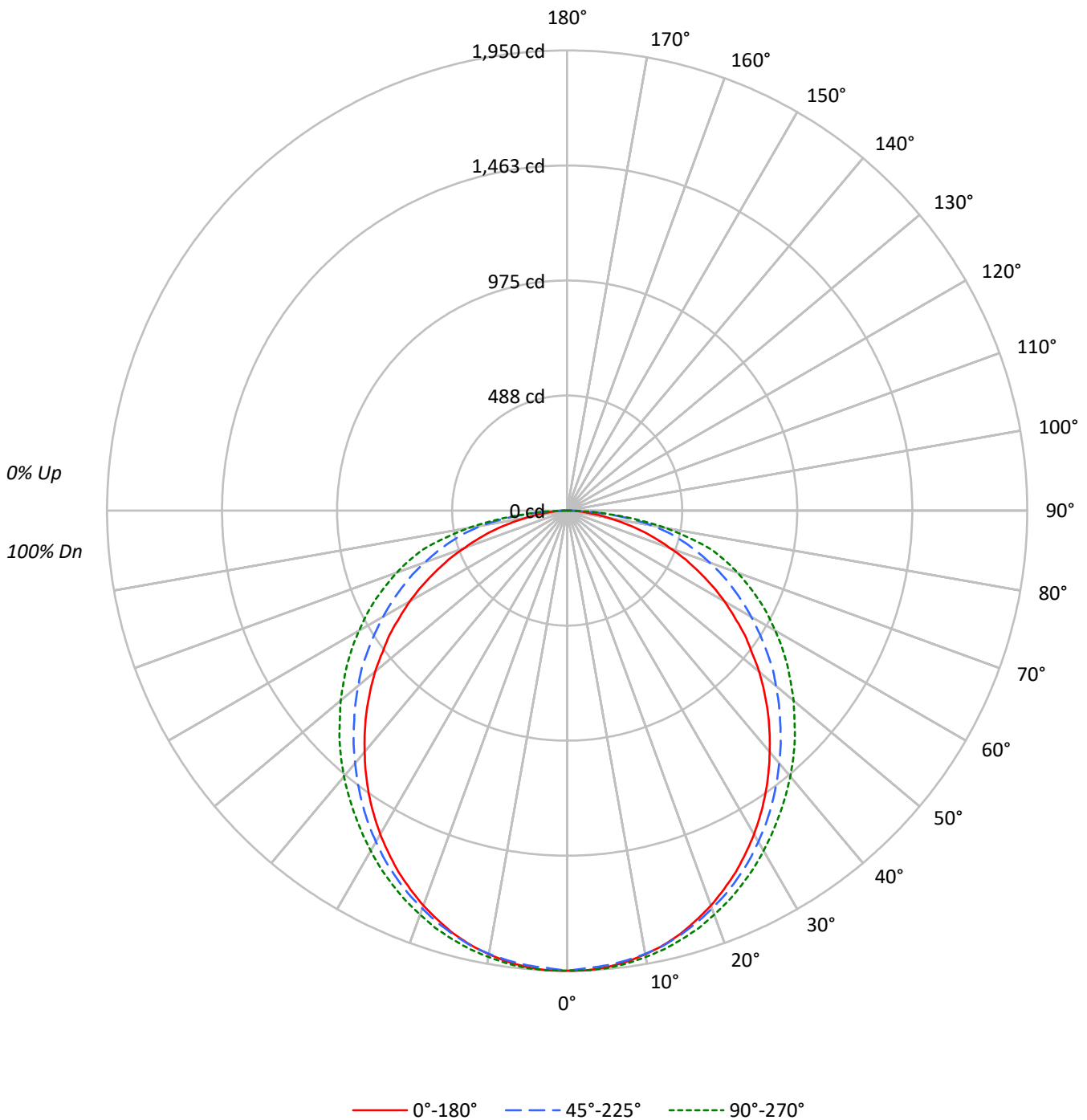
Input Watts (W): 42.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2624	2624	2624
5°	2623	2613	2628
10°	2608	2606	2624
15°	2587	2592	2619
20°	2551	2570	2609
25°	2509	2547	2598
30°	2460	2518	2587
35°	2407	2486	2579
40°	2346	2455	2584
45°	2287	2431	2597
50°	2223	2418	2621
55°	2155	2414	2669
60°	2071	2425	2738
65°	1962	2462	2857
70°	1823	2524	3020
75°	1663	2650	3275
80°	1367	2854	3274
85°	1047	2634	2813



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	184.4	3.2
10°-20°	526.5	9.1
20°-30°	792.3	13.6
30°-40°	949.5	16.3
40°-50°	989.5	17.0
50°-60°	920.6	15.9
60°-70°	758.2	13.1
70°-80°	516.4	8.9
80°-90°	170.5	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°	1503.2	25.9
0°-40°	2452.7	42.2
0°-60°	4362.7	75.1
0°-90°	5807.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5807.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1950	1950	1950	1950	1950	
5°	1942	1942	1934	1944	1946	184
15°	1857	1859	1861	1878	1880	523
25°	1690	1698	1715	1744	1750	778
35°	1465	1483	1514	1554	1570	916
45°	1202	1227	1277	1341	1365	927
55°	919	950	1029	1111	1138	819
65°	616	669	773	864	897	612
75°	320	392	510	601	630	337
85°	68	132	171	182	182	84
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1949.9	1949.9	1949.9	1949.9	1949.9
2.5°	1949.9	1949.9	1940.3	1949.9	1949.9
5°	1942.2	1942.2	1934.4	1944.1	1946.1
7.5°	1928.6	1930.6	1922.8	1934.4	1936.4
10°	1909.2	1911.2	1907.3	1918.9	1920.9
12.5°	1886.0	1887.9	1887.9	1901.5	1903.4
15°	1856.9	1858.8	1860.8	1878.2	1880.2
17.5°	1820.1	1825.9	1829.8	1851.1	1855.0
20°	1781.3	1787.1	1794.9	1818.1	1822.0
22.5°	1736.7	1744.5	1758.1	1783.3	1789.1
25°	1690.2	1698.0	1715.4	1744.5	1750.3
27.5°	1637.9	1649.5	1670.8	1701.8	1709.6
30°	1583.6	1595.2	1620.4	1653.4	1665.0
32.5°	1525.5	1541.0	1570.0	1606.9	1618.5
35°	1465.4	1482.8	1513.8	1554.5	1570.0
37.5°	1401.4	1420.8	1457.6	1502.2	1521.6
40°	1335.5	1358.8	1397.5	1449.9	1471.2
42.5°	1269.6	1290.9	1339.4	1395.6	1418.8
45°	1201.8	1227.0	1277.4	1341.3	1364.6
47.5°	1132.0	1157.2	1217.3	1285.1	1306.4
50°	1062.2	1087.4	1155.2	1227.0	1252.2
52.5°	986.6	1019.6	1097.1	1168.8	1194.0
55°	918.8	949.8	1029.2	1110.7	1137.8
57.5°	841.2	878.1	965.3	1050.6	1079.6
60°	769.5	808.3	901.3	988.5	1017.6
62.5°	695.9	738.5	837.4	926.5	959.5
65°	616.4	668.7	773.4	864.5	897.4
67.5°	544.7	598.9	709.4	802.5	831.5
70°	463.3	529.2	641.6	734.6	767.6
72.5°	393.5	459.4	577.6	668.7	701.7
75°	319.8	391.5	509.8	600.9	630.0
77.5°	246.2	325.6	443.9	513.7	523.3
80°	176.4	259.7	368.3	409.0	422.6
82.5°	124.1	199.6	271.4	298.5	306.3
85°	67.8	131.8	170.6	182.2	182.2
87.5°	29.1	56.2	67.8	69.8	71.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)