

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: P390917

Luminaire Tested: **24CZ2-100VHE-RDP-UNV-L940-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: P390917  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-100VHE-RDP-UNV-L940-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5855.0 lumens  
Efficiency: N/A  
Efficacy: 84.1 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

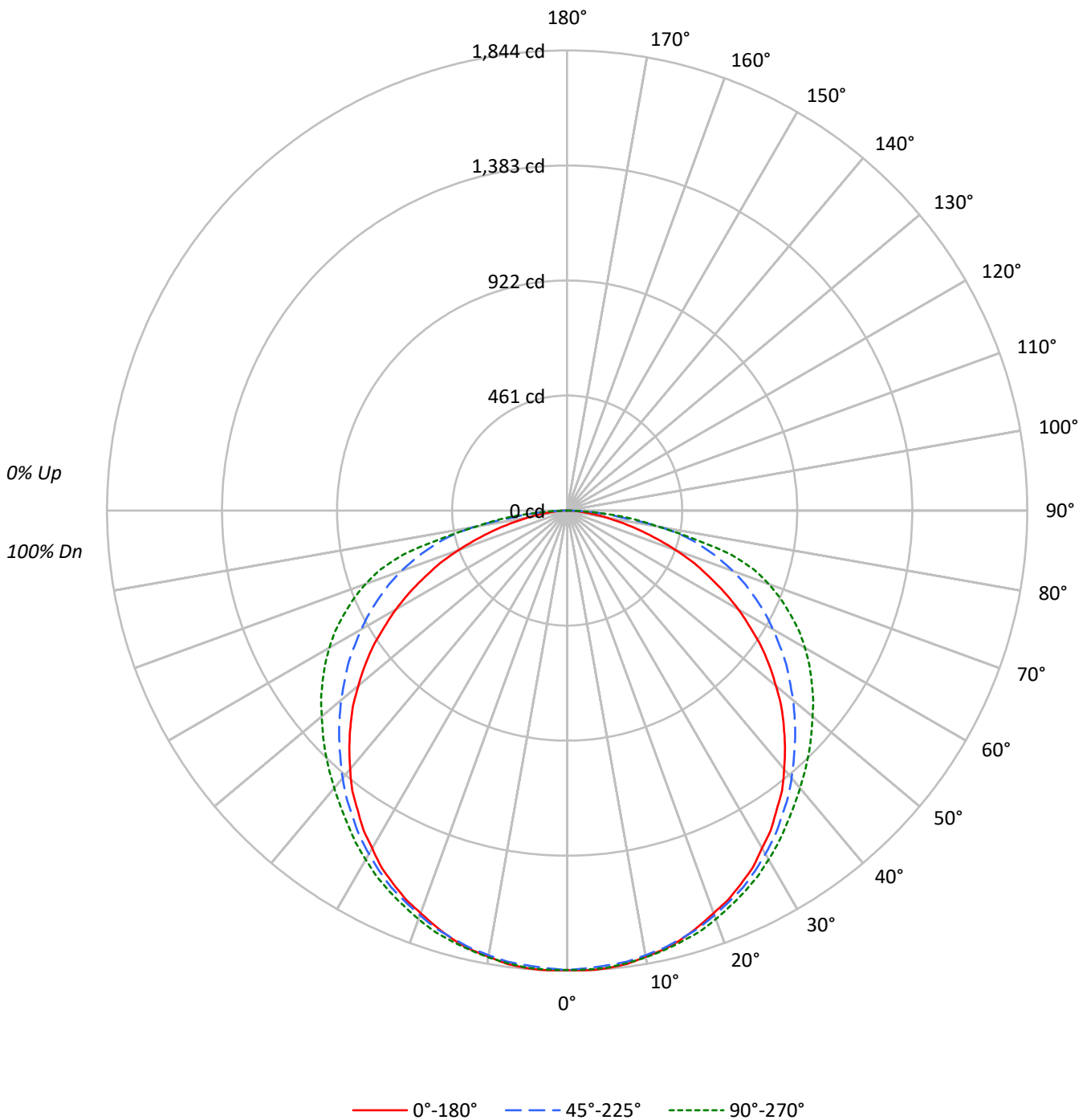
Input Watts (W): 69.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	2477	2477	2477
5°	2487	2471	2483
10°	2480	2472	2484
15°	2476	2472	2488
20°	2458	2470	2495
25°	2449	2475	2501
30°	2427	2468	2509
35°	2404	2461	2519
40°	2377	2459	2550
45°	2338	2459	2608
50°	2286	2474	2687
55°	2228	2514	2807
60°	2133	2563	2962
65°	1997	2654	3144
70°	1817	2776	3382
75°	1540	2929	3533
80°	1215	2947	2858
85°	897	2242	2510



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	174.7	3.0
10°-20°	502.7	8.6
20°-30°	768.7	13.1
30°-40°	939.7	16.0
40°-50°	1001.5	17.1
50°-60°	957.6	16.4
60°-70°	811.2	13.9
70°-80°	545.2	9.3
80°-90°	153.8	2.6
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°	1446.0	24.7
0°-40°	2385.7	40.7
0°-60°	4344.8	74.2
0°-90°	5855.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5855.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1841	1841	1841	1841	1841	
5°	1841	1838	1830	1838	1838	175
15°	1777	1777	1774	1789	1786	501
25°	1650	1655	1667	1682	1684	760
35°	1464	1475	1498	1528	1533	917
45°	1228	1249	1292	1348	1371	948
55°	950	984	1072	1156	1196	846
65°	627	691	834	944	987	623
75°	296	404	563	659	680	317
85°	58	119	145	157	163	72
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1841.2	1841.2	1841.2	1841.2	1841.2
2.5°	1844.1	1844.1	1835.4	1841.2	1841.2
5°	1841.2	1838.3	1829.6	1838.3	1838.3
7.5°	1832.5	1829.6	1823.8	1832.5	1829.6
10°	1815.1	1815.1	1809.3	1818.0	1818.0
12.5°	1800.6	1797.7	1794.8	1806.4	1803.5
15°	1777.3	1777.3	1774.4	1789.0	1786.1
17.5°	1748.3	1751.2	1754.1	1765.7	1768.6
20°	1716.4	1722.2	1725.1	1742.5	1742.5
22.5°	1687.3	1690.2	1696.0	1713.4	1713.4
25°	1649.6	1655.4	1667.0	1681.5	1684.4
27.5°	1611.8	1614.7	1629.2	1649.6	1652.5
30°	1562.4	1571.1	1588.6	1611.8	1614.7
32.5°	1518.9	1527.6	1547.9	1571.1	1577.0
35°	1463.7	1475.3	1498.5	1527.6	1533.4
37.5°	1414.3	1423.0	1452.1	1484.0	1492.7
40°	1353.3	1370.8	1399.8	1437.6	1452.1
42.5°	1292.3	1309.8	1344.6	1394.0	1411.4
45°	1228.5	1248.8	1292.3	1347.5	1370.8
47.5°	1164.6	1187.8	1237.2	1301.1	1327.2
50°	1092.0	1121.0	1182.0	1254.6	1283.6
52.5°	1022.3	1057.1	1123.9	1205.2	1243.0
55°	949.7	984.5	1071.6	1155.9	1196.5
57.5°	868.3	914.8	1010.6	1106.5	1150.0
60°	792.8	836.4	952.6	1057.1	1100.7
62.5°	711.5	769.6	894.5	1004.8	1048.4
65°	627.3	691.2	833.5	943.8	987.4
67.5°	551.8	621.5	772.5	882.9	926.4
70°	461.8	548.9	705.7	816.1	859.6
72.5°	377.5	473.4	636.0	743.5	784.1
75°	296.2	403.7	563.4	659.2	679.6
77.5°	220.7	334.0	487.9	528.6	514.0
80°	156.8	267.2	380.4	360.1	368.8
82.5°	101.6	203.3	235.2	267.2	275.9
85°	58.1	119.1	145.2	156.8	162.6
87.5°	26.1	43.6	58.1	58.1	55.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)