

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: P388877

Luminaire Tested: **24CZ2-55VHE-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: P388877  
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: 24CZ2-55VHE-UNV-L940-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

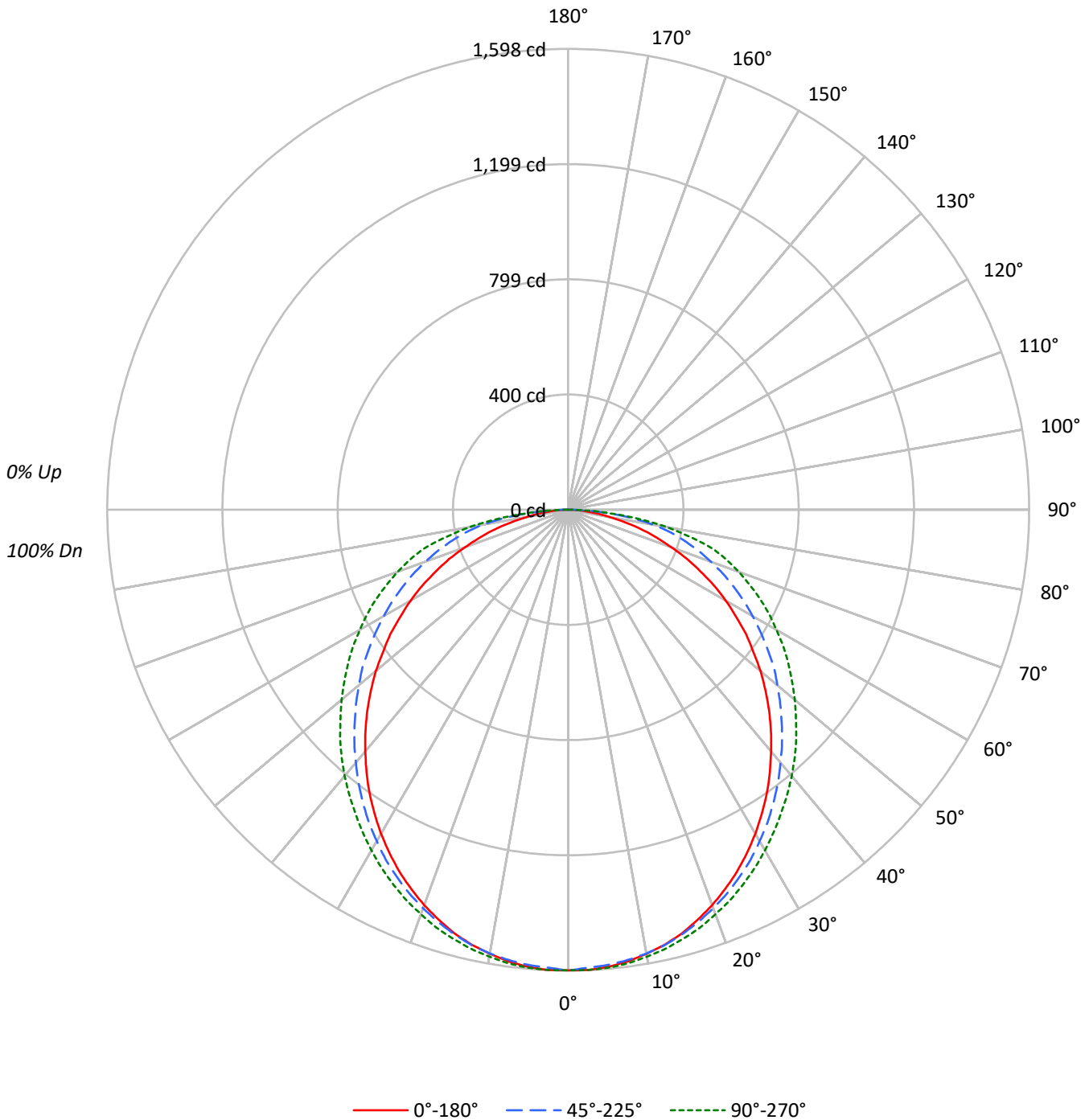
Lumens per Lamp: N/A  
Luminaire Lumens: 4758.0 lumens  
Efficiency: N/A  
Efficacy: 131.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 36.1  
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°	2149	2149	2149
5°	2149	2140	2153
10°	2137	2135	2150
15°	2119	2123	2146
20°	2089	2105	2137
25°	2056	2086	2129
30°	2016	2062	2119
35°	1972	2037	2113
40°	1922	2011	2117
45°	1873	1991	2127
50°	1822	1981	2147
55°	1766	1978	2187
60°	1696	1987	2243
65°	1608	2017	2341
70°	1493	2068	2474
75°	1362	2171	2683
80°	1120	2338	2682
85°	858	2157	2305



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	151.1	3.2
10°-20°	431.3	9.1
20°-30°	649.1	13.6
30°-40°	777.9	16.3
40°-50°	810.6	17.0
50°-60°	754.2	15.9
60°-70°	621.1	13.1
70°-80°	423.0	8.9
80°-90°	139.7	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°	1231.5	25.9
0°-40°	2009.3	42.2
0°-60°	3574.1	75.1
0°-90°	4758.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4758.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1598	1598	1598	1598	1598	
5°	1591	1591	1585	1593	1594	151
15°	1521	1523	1524	1539	1540	429
25°	1385	1391	1405	1429	1434	637
35°	1200	1215	1240	1274	1286	750
45°	984	1005	1046	1099	1118	759
55°	753	778	843	910	932	671
65°	505	548	634	708	735	501
75°	262	321	418	492	516	276
85°	56	108	140	149	149	69
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1597.5	1597.5	1597.5	1597.5	1597.5
2.5°	1597.5	1597.5	1589.5	1597.5	1597.5
5°	1591.1	1591.1	1584.8	1592.7	1594.3
7.5°	1580.0	1581.6	1575.3	1584.8	1586.4
10°	1564.1	1565.7	1562.5	1572.1	1573.7
12.5°	1545.1	1546.7	1546.7	1557.8	1559.4
15°	1521.3	1522.8	1524.4	1538.7	1540.3
17.5°	1491.1	1495.9	1499.0	1516.5	1519.7
20°	1459.3	1464.1	1470.4	1489.5	1492.7
22.5°	1422.8	1429.2	1440.3	1460.9	1465.7
25°	1384.7	1391.0	1405.3	1429.2	1433.9
27.5°	1341.8	1351.3	1368.8	1394.2	1400.6
30°	1297.4	1306.9	1327.5	1354.5	1364.1
32.5°	1249.7	1262.4	1286.2	1316.4	1325.9
35°	1200.5	1214.8	1240.2	1273.5	1286.2
37.5°	1148.1	1164.0	1194.1	1230.7	1246.5
40°	1094.1	1113.2	1144.9	1187.8	1205.3
42.5°	1040.1	1057.6	1097.3	1143.3	1162.4
45°	984.5	1005.2	1046.5	1098.9	1117.9
47.5°	927.4	948.0	997.2	1052.8	1070.3
50°	870.2	890.8	946.4	1005.2	1025.8
52.5°	808.3	835.3	898.8	957.5	978.2
55°	752.7	778.1	843.2	909.9	932.1
57.5°	689.2	719.3	790.8	860.7	884.5
60°	630.4	662.2	738.4	809.9	833.7
62.5°	570.1	605.0	686.0	759.0	786.0
65°	505.0	547.8	633.6	708.2	735.2
67.5°	446.2	490.7	581.2	657.4	681.2
70°	379.5	433.5	525.6	601.8	628.8
72.5°	322.4	376.3	473.2	547.8	574.8
75°	262.0	320.8	417.6	492.3	516.1
77.5°	201.7	266.8	363.6	420.8	428.7
80°	144.5	212.8	301.7	335.1	346.2
82.5°	101.6	163.6	222.3	244.5	250.9
85°	55.6	108.0	139.7	149.3	149.3
87.5°	23.8	46.1	55.6	57.2	58.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)