

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: P388829

Luminaire Tested: **24CZ2-45VHE-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: P388829
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: 24CZ2-45VHE-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

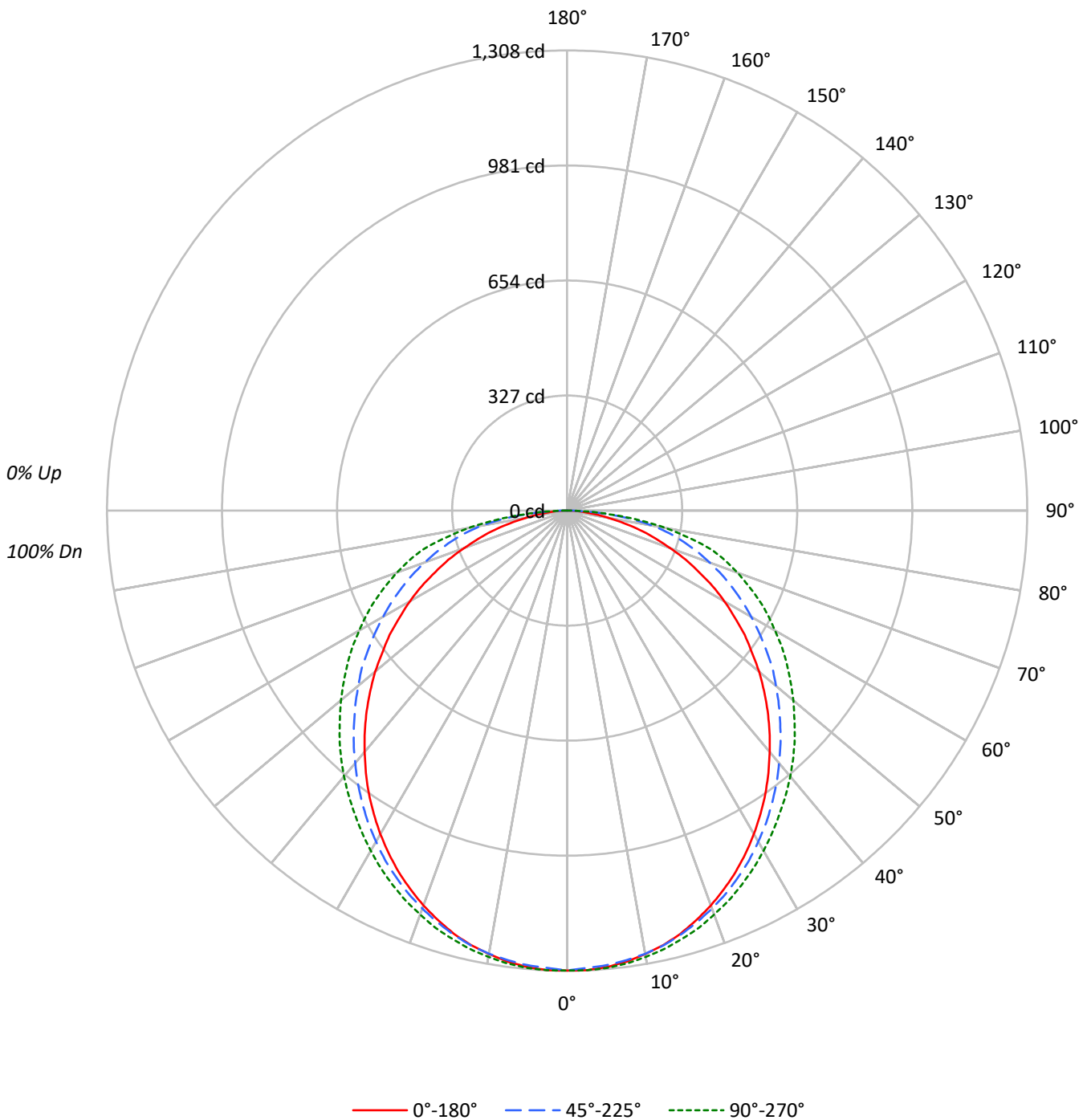
Lumens per Lamp: N/A
Luminaire Lumens: 3894.4 lumens
Efficiency: N/A
Efficacy: 131.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 29.6
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	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°	1759	1759	1759
5°	1759	1752	1762
10°	1749	1747	1760
15°	1734	1738	1756
20°	1710	1723	1749
25°	1683	1708	1742
30°	1650	1688	1735
35°	1614	1667	1729
40°	1573	1646	1733
45°	1533	1630	1741
50°	1491	1621	1757
55°	1445	1619	1790
60°	1389	1626	1836
65°	1316	1651	1916
70°	1222	1692	2025
75°	1115	1777	2196
80°	917	1913	2195
85°	702	1766	1886



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.7	3.2
10°-20°	353.0	9.1
20°-30°	531.3	13.6
30°-40°	636.7	16.3
40°-50°	663.5	17.0
50°-60°	617.3	15.9
60°-70°	508.4	13.1
70°-80°	346.2	8.9
80°-90°	114.3	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°	1008.0	25.9
0°-40°	1644.7	42.2
0°-60°	2925.4	75.1
0°-90°	3894.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3894.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1308	1308	1308	1308	1308	
5°	1302	1302	1297	1304	1305	124
15°	1245	1246	1248	1259	1261	351
25°	1133	1139	1150	1170	1174	522
35°	983	994	1015	1042	1053	614
45°	806	823	856	899	915	621
55°	616	637	690	745	763	549
65°	413	448	519	580	602	410
75°	214	262	342	403	422	226
85°	46	88	114	122	122	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1307.5	1307.5	1307.5	1307.5	1307.5
2.5°	1307.5	1307.5	1301.0	1307.5	1307.5
5°	1302.3	1302.3	1297.1	1303.6	1304.9
7.5°	1293.2	1294.5	1289.3	1297.1	1298.4
10°	1280.2	1281.5	1278.9	1286.7	1288.0
12.5°	1264.6	1265.9	1265.9	1275.0	1276.3
15°	1245.1	1246.4	1247.7	1259.4	1260.7
17.5°	1220.4	1224.3	1226.9	1241.2	1243.8
20°	1194.5	1198.4	1203.6	1219.1	1221.7
22.5°	1164.6	1169.8	1178.9	1195.8	1199.7
25°	1133.4	1138.6	1150.3	1169.8	1173.7
27.5°	1098.3	1106.1	1120.4	1141.2	1146.4
30°	1061.9	1069.7	1086.6	1108.7	1116.5
32.5°	1022.9	1033.3	1052.8	1077.5	1085.3
35°	982.6	994.3	1015.1	1042.4	1052.8
37.5°	939.7	952.7	977.4	1007.3	1020.3
40°	895.5	911.1	937.1	972.2	986.5
42.5°	851.3	865.6	898.1	935.8	951.4
45°	805.8	822.7	856.5	899.4	915.0
47.5°	759.0	775.9	816.2	861.7	876.0
50°	712.3	729.2	774.6	822.7	839.6
52.5°	661.6	683.7	735.6	783.7	800.6
55°	616.1	636.9	690.2	744.7	762.9
57.5°	564.1	588.8	647.3	704.5	724.0
60°	516.0	542.0	604.4	662.9	682.4
62.5°	466.6	495.2	561.5	621.3	643.4
65°	413.3	448.4	518.6	579.7	601.8
67.5°	365.2	401.6	475.7	538.1	557.6
70°	310.6	354.8	430.2	492.6	514.7
72.5°	263.8	308.0	387.3	448.4	470.5
75°	214.5	262.5	341.8	402.9	422.4
77.5°	165.1	218.4	297.6	344.4	350.9
80°	118.3	174.2	246.9	274.2	283.3
82.5°	83.2	133.9	182.0	200.2	205.4
85°	45.5	88.4	114.4	122.2	122.2
87.5°	19.5	37.7	45.5	46.8	48.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)