

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: P388643

Luminaire Tested: **24CZ2-40HE-SQR-UNV-L950-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: P388643  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-40HE-SQR-UNV-L950-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

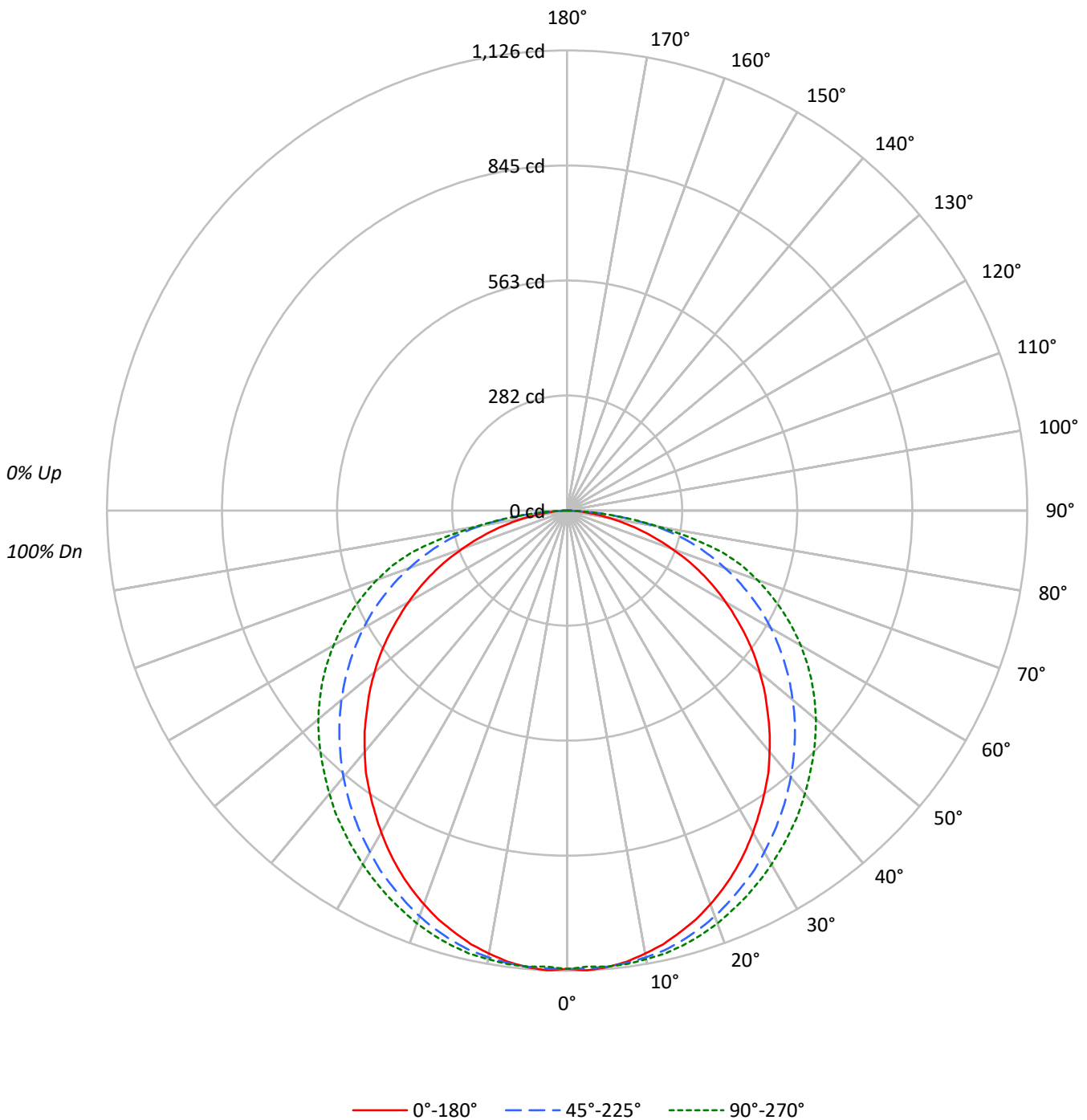
Lumens per Lamp: N/A  
Luminaire Lumens: 3508.4 lumens  
Efficiency: N/A  
Efficacy: 114.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 30.6  
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	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					100			
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82					82			
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67					67			
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47					47			
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41					41			
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35					35			
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28					28			
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25					25			
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22					22			

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

	0°	45°	90°
0°	1509	1509	1509
5°	1515	1513	1513
10°	1504	1516	1523
15°	1488	1517	1533
20°	1468	1513	1539
25°	1443	1505	1545
30°	1413	1499	1553
35°	1384	1496	1568
40°	1353	1496	1589
45°	1318	1499	1620
50°	1288	1508	1664
55°	1250	1525	1715
60°	1207	1549	1777
65°	1154	1579	1852
70°	1071	1618	1946
75°	970	1674	2036
80°	817	1678	1750
85°	625	1271	1271



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	106.5	3.0
10°-20°	306.3	8.7
20°-30°	465.2	13.3
30°-40°	565.9	16.1
40°-50°	602.5	17.2
50°-60°	573.8	16.4
60°-70°	479.9	13.7
70°-80°	319.9	9.1
80°-90°	88.5	2.5
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°	877.9	25.0
0°-40°	1443.8	41.2
0°-60°	2620.1	74.7
0°-90°	3508.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3508.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1122	1122	1122	1122	1122	
5°	1122	1114	1120	1120	1120	106
15°	1068	1070	1089	1097	1101	301
25°	972	985	1014	1031	1040	448
35°	842	867	911	941	955	527
45°	693	730	788	832	852	536
55°	533	579	650	707	731	476
65°	363	416	496	557	582	358
75°	186	246	322	376	392	198
85°	40	75	82	81	82	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1121.5	1121.5	1121.5	1121.5	1121.5
2.5°	1126.1	1118.0	1121.5	1121.5	1116.8
5°	1121.5	1114.5	1120.3	1120.3	1120.3
7.5°	1113.3	1107.6	1116.8	1119.1	1119.1
10°	1100.6	1098.3	1109.9	1113.3	1114.5
12.5°	1086.7	1085.5	1101.8	1106.4	1109.9
15°	1068.2	1070.5	1089.0	1097.1	1100.6
17.5°	1048.5	1053.1	1074.0	1085.5	1089.0
20°	1025.3	1032.2	1056.6	1068.2	1075.1
22.5°	999.8	1010.2	1035.7	1049.6	1057.7
25°	972.0	984.7	1013.7	1031.1	1040.4
27.5°	941.9	958.1	991.7	1011.4	1020.7
30°	909.4	928.0	965.1	988.2	999.8
32.5°	875.8	897.9	938.4	963.9	977.8
35°	842.3	866.6	910.6	940.7	954.6
37.5°	808.7	833.0	881.6	914.1	931.5
40°	770.4	799.4	851.5	887.4	904.8
42.5°	733.3	764.6	820.2	859.6	878.2
45°	692.8	729.9	787.8	831.8	851.5
47.5°	655.7	692.8	755.4	801.7	823.7
50°	615.2	654.6	720.6	771.6	794.8
52.5°	575.8	616.3	685.8	740.3	763.5
55°	532.9	579.3	649.9	706.7	731.0
57.5°	490.1	539.9	612.9	671.9	696.3
60°	448.4	499.3	575.8	634.9	660.4
62.5°	406.6	457.6	537.6	597.8	622.1
65°	362.6	415.9	495.9	557.3	581.6
67.5°	318.6	374.2	454.1	515.5	538.7
70°	272.3	331.3	411.3	471.5	494.7
72.5°	229.4	288.5	367.3	426.3	448.4
75°	186.5	245.6	322.1	376.5	391.6
77.5°	144.8	203.9	272.3	308.2	311.6
80°	105.4	161.0	216.6	227.1	225.9
82.5°	70.7	120.5	149.5	150.6	154.1
85°	40.5	75.3	82.3	81.1	82.3
87.5°	16.2	26.6	23.2	17.4	17.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)