

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: P388850

Luminaire Tested: **24CZ2-50VHE-UNV-L935-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: P388850  
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: 24CZ2-50VHE-UNV-L935-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

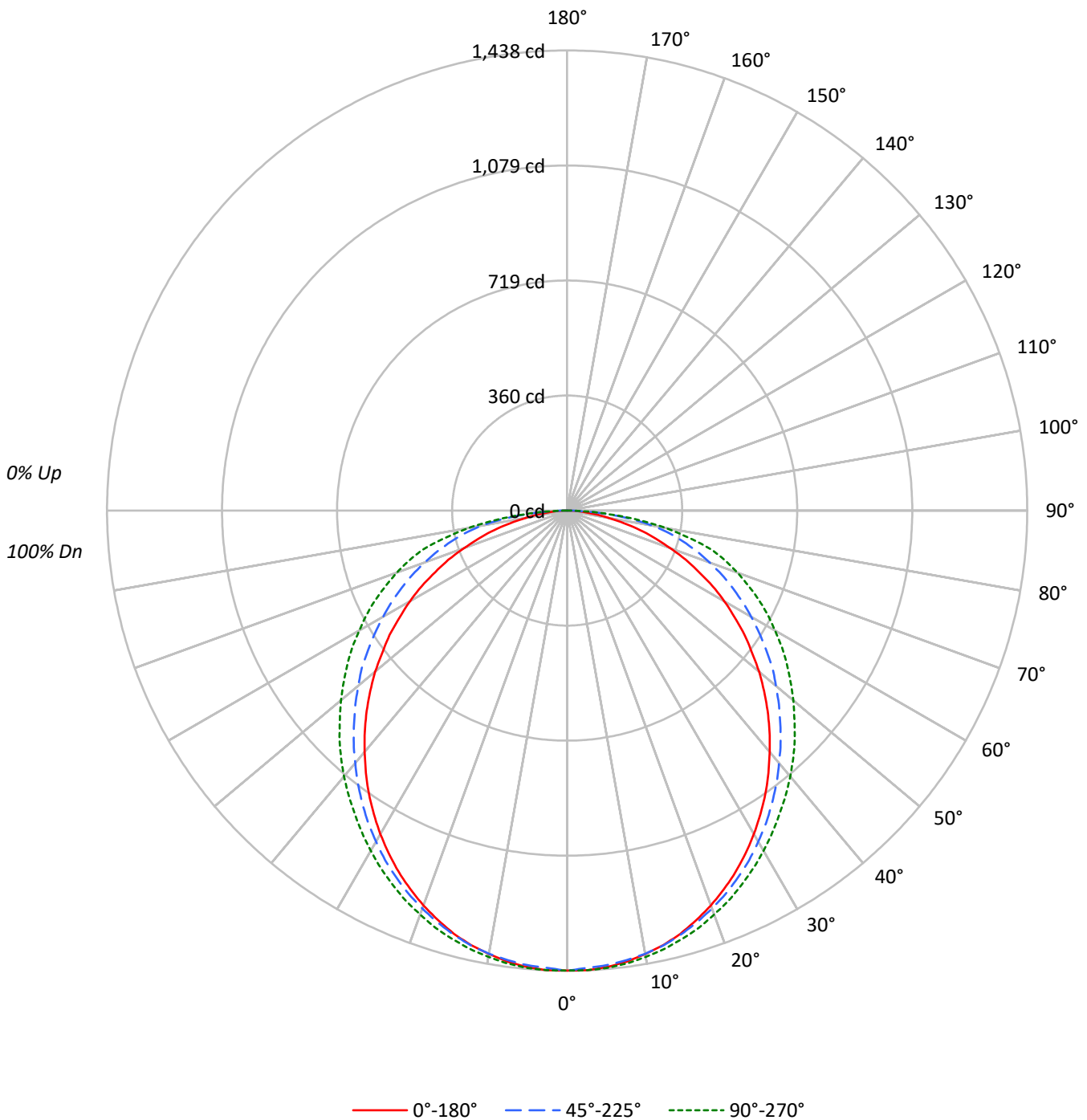
Lumens per Lamp: N/A  
Luminaire Lumens: 4281.5 lumens  
Efficiency: N/A  
Efficacy: 130.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 32.7  
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°	1934	1934	1934
5°	1934	1926	1938
10°	1923	1921	1935
15°	1907	1911	1931
20°	1880	1895	1923
25°	1850	1877	1916
30°	1814	1856	1907
35°	1774	1833	1901
40°	1729	1810	1905
45°	1686	1792	1914
50°	1639	1783	1932
55°	1589	1780	1968
60°	1527	1788	2019
65°	1447	1815	2106
70°	1343	1861	2226
75°	1226	1954	2414
80°	1007	2104	2414
85°	772	1941	2073



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	136.0	3.2
10°-20°	388.1	9.1
20°-30°	584.1	13.6
30°-40°	700.0	16.3
40°-50°	729.4	17.0
50°-60°	678.7	15.9
60°-70°	559.0	13.1
70°-80°	380.7	8.9
80°-90°	125.7	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°	1108.2	25.9
0°-40°	1808.1	42.2
0°-60°	3216.2	75.1
0°-90°	4281.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4281.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1438	1438	1438	1438	1438	
5°	1432	1432	1426	1433	1435	136
15°	1369	1370	1372	1385	1386	386
25°	1246	1252	1265	1286	1290	574
35°	1080	1093	1116	1146	1157	675
45°	886	904	942	989	1006	683
55°	677	700	759	819	839	604
65°	454	493	570	637	662	451
75°	236	289	376	443	464	249
85°	50	97	126	134	134	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1437.5	1437.5	1437.5	1437.5	1437.5
2.5°	1437.5	1437.5	1430.4	1437.5	1437.5
5°	1431.8	1431.8	1426.1	1433.2	1434.6
7.5°	1421.8	1423.2	1417.5	1426.1	1427.5
10°	1407.5	1408.9	1406.1	1414.6	1416.1
12.5°	1390.3	1391.8	1391.8	1401.8	1403.2
15°	1368.9	1370.3	1371.8	1384.6	1386.1
17.5°	1341.8	1346.0	1348.9	1364.6	1367.5
20°	1313.2	1317.5	1323.2	1340.3	1343.2
22.5°	1280.3	1286.0	1296.0	1314.6	1318.9
25°	1246.0	1251.7	1264.6	1286.0	1290.3
27.5°	1207.4	1216.0	1231.7	1254.6	1260.3
30°	1167.4	1176.0	1194.6	1218.9	1227.4
32.5°	1124.6	1136.0	1157.4	1184.6	1193.2
35°	1080.3	1093.1	1116.0	1146.0	1157.4
37.5°	1033.1	1047.4	1074.6	1107.4	1121.7
40°	984.5	1001.7	1030.3	1068.8	1084.6
42.5°	935.9	951.7	987.4	1028.8	1046.0
45°	885.9	904.5	941.7	988.8	1006.0
47.5°	834.5	853.1	897.4	947.4	963.1
50°	783.1	801.6	851.6	904.5	923.1
52.5°	727.3	751.6	808.8	861.6	880.2
55°	677.3	700.2	758.8	818.8	838.8
57.5°	620.2	647.3	711.6	774.5	795.9
60°	567.3	595.9	664.5	728.8	750.2
62.5°	513.0	544.4	617.3	683.0	707.3
65°	454.4	493.0	570.1	637.3	661.6
67.5°	401.5	441.5	523.0	591.6	613.0
70°	341.5	390.1	473.0	541.6	565.9
72.5°	290.1	338.7	425.8	493.0	517.3
75°	235.8	288.6	375.8	443.0	464.4
77.5°	181.5	240.1	327.2	378.7	385.8
80°	130.0	191.5	271.5	301.5	311.5
82.5°	91.5	147.2	200.0	220.1	225.8
85°	50.0	97.2	125.7	134.3	134.3
87.5°	21.4	41.4	50.0	51.4	52.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)