

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: P388832

Luminaire Tested: **24CZ2-45VHE-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: P388832  
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-L950-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

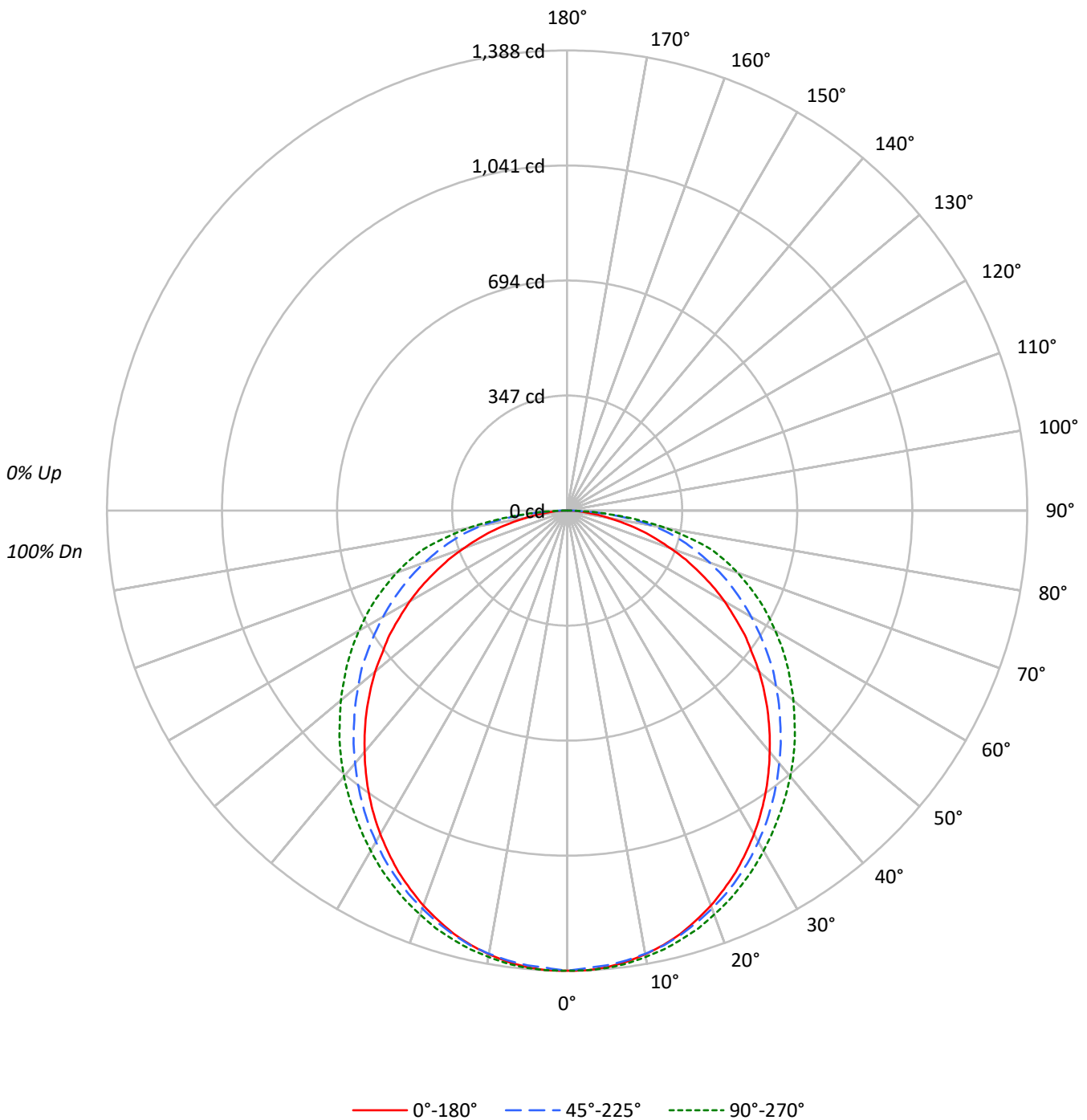
Lumens per Lamp: N/A  
Luminaire Lumens: 4133.7 lumens  
Efficiency: N/A  
Efficacy: 139.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	1867	1867	1867
5°	1867	1860	1871
10°	1857	1855	1868
15°	1841	1845	1864
20°	1815	1829	1857
25°	1786	1813	1849
30°	1751	1792	1841
35°	1713	1770	1836
40°	1669	1747	1839
45°	1628	1730	1848
50°	1582	1721	1865
55°	1534	1719	1900
60°	1474	1726	1949
65°	1397	1753	2034
70°	1297	1796	2149
75°	1183	1886	2331
80°	972	2031	2331
85°	746	1874	2002



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	131.3	3.2
10°-20°	374.7	9.1
20°-30°	563.9	13.6
30°-40°	675.8	16.3
40°-50°	704.2	17.0
50°-60°	655.2	15.9
60°-70°	539.7	13.1
70°-80°	367.5	8.9
80°-90°	121.3	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°	1069.9	25.9
0°-40°	1745.7	42.2
0°-60°	3105.2	75.1
0°-90°	4133.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4133.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1388	1388	1388	1388	1388	
5°	1382	1382	1377	1384	1385	131
15°	1322	1323	1324	1337	1338	372
25°	1203	1208	1221	1242	1246	554
35°	1043	1055	1078	1106	1118	652
45°	855	873	909	955	971	660
55°	654	676	733	790	810	583
65°	439	476	550	615	639	435
75°	228	279	363	428	448	240
85°	48	94	121	130	130	60
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1387.9	1387.9	1387.9	1387.9	1387.9
2.5°	1387.9	1387.9	1381.0	1387.9	1387.9
5°	1382.4	1382.4	1376.8	1383.7	1385.1
7.5°	1372.7	1374.1	1368.6	1376.8	1378.2
10°	1358.9	1360.3	1357.5	1365.8	1367.2
12.5°	1342.3	1343.7	1343.7	1353.4	1354.8
15°	1321.7	1323.0	1324.4	1336.8	1338.2
17.5°	1295.4	1299.6	1302.3	1317.5	1320.3
20°	1267.9	1272.0	1277.5	1294.1	1296.8
22.5°	1236.1	1241.6	1251.3	1269.2	1273.4
25°	1203.0	1208.5	1220.9	1241.6	1245.8
27.5°	1165.8	1174.0	1189.2	1211.3	1216.8
30°	1127.1	1135.4	1153.3	1176.8	1185.1
32.5°	1085.7	1096.8	1117.5	1143.7	1152.0
35°	1043.0	1055.4	1077.5	1106.4	1117.5
37.5°	997.4	1011.2	1037.5	1069.2	1083.0
40°	950.5	967.1	994.7	1031.9	1047.1
42.5°	903.6	918.8	953.3	993.3	1009.9
45°	855.4	873.3	909.2	954.7	971.2
47.5°	805.7	823.6	866.4	914.7	929.8
50°	756.0	774.0	822.2	873.3	891.2
52.5°	702.2	725.7	780.9	831.9	849.8
55°	653.9	676.0	732.6	790.5	809.8
57.5°	598.7	625.0	687.0	747.7	768.4
60°	547.7	575.3	641.5	703.6	724.3
62.5°	495.3	525.6	596.0	659.4	682.9
65°	438.7	476.0	550.5	615.3	638.8
67.5°	387.7	426.3	504.9	571.2	591.8
70°	329.7	376.6	456.6	522.9	546.3
72.5°	280.1	327.0	411.1	476.0	499.4
75°	227.6	278.7	362.8	427.7	448.4
77.5°	175.2	231.8	315.9	365.6	372.5
80°	125.5	184.9	262.1	291.1	300.8
82.5°	88.3	142.1	193.1	212.5	218.0
85°	48.3	93.8	121.4	129.7	129.7
87.5°	20.7	40.0	48.3	49.7	51.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)