

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: P391733

Luminaire Tested: **24CZ2-80VHE-RDP-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: P391733  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-80VHE-RDP-UNV-L940-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4669.7 lumens  
Efficiency: N/A  
Efficacy: 86.8 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

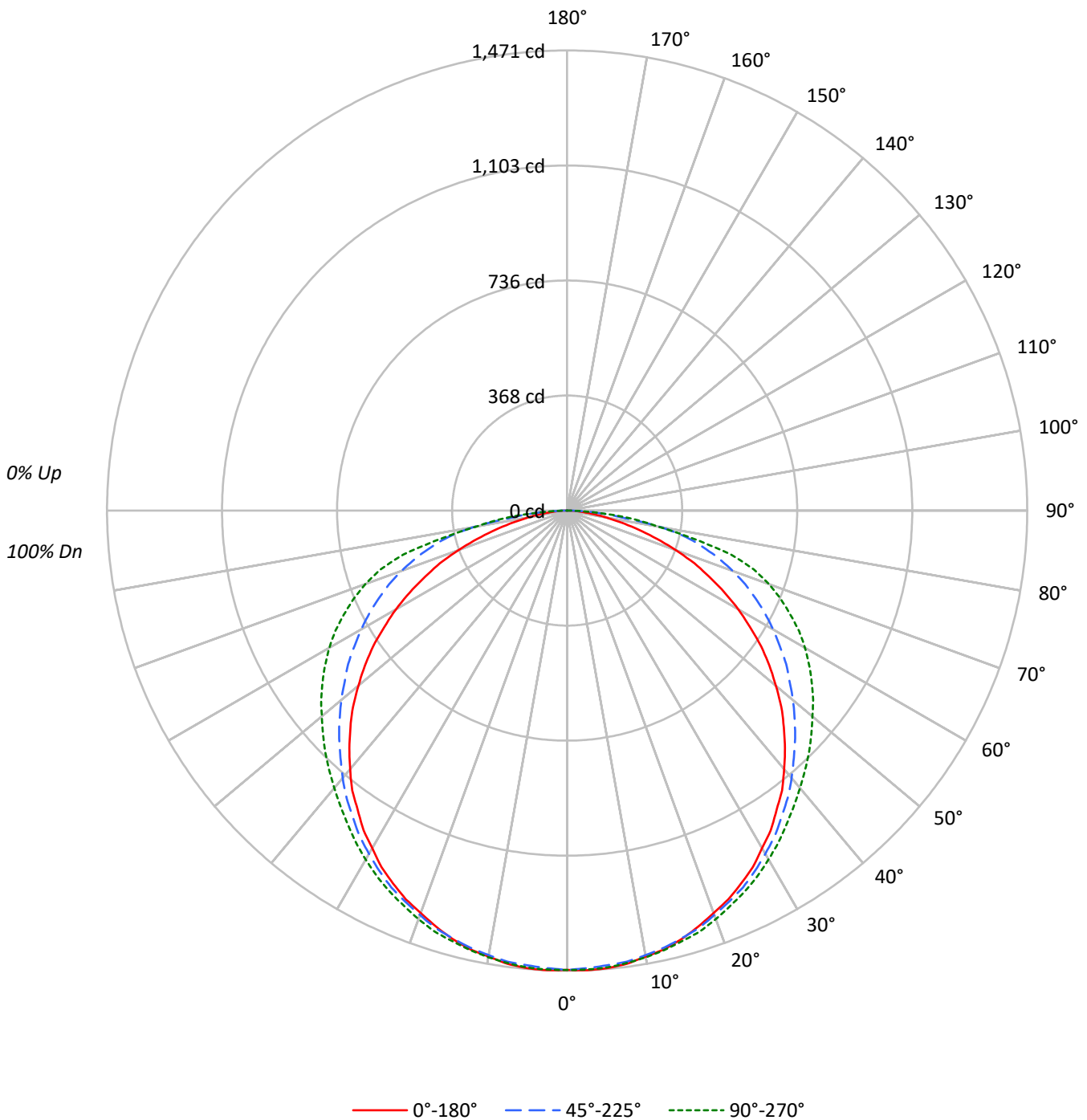
Input Watts (W): 53.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P391733

CATALOG NUMBER: 24CZ2-80VHE-RDP-UNV-L940-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P391733

CATALOG NUMBER: 24CZ2-80VHE-RDP-UNV-L940-CD1-U

**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24

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

	0°	45°	90°
0°	1976	1976	1976
5°	1983	1971	1980
10°	1978	1971	1981
15°	1975	1971	1984
20°	1960	1970	1990
25°	1953	1974	1994
30°	1936	1968	2001
35°	1918	1963	2009
40°	1896	1961	2034
45°	1864	1961	2080
50°	1823	1973	2143
55°	1777	2005	2239
60°	1702	2044	2362
65°	1593	2117	2507
70°	1449	2214	2697
75°	1228	2336	2818
80°	969	2351	2280
85°	715	1788	2002



TEST NUMBER: P391733

CATALOG NUMBER: 24CZ2-80VHE-RDP-UNV-L940-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.3	3.0
10°-20°	400.9	8.6
20°-30°	613.1	13.1
30°-40°	749.5	16.0
40°-50°	798.8	17.1
50°-60°	763.7	16.4
60°-70°	647.0	13.9
70°-80°	434.8	9.3
80°-90°	122.6	2.6
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°	1153.3	24.7
0°-40°	1902.7	40.7
0°-60°	3465.2	74.2
0°-90°	4669.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4669.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1468	1468	1468	1468	1468	
5°	1468	1466	1459	1466	1466	140
15°	1418	1418	1415	1427	1424	400
25°	1316	1320	1330	1341	1343	606
35°	1167	1177	1195	1218	1223	731
45°	980	996	1031	1075	1093	756
55°	757	785	855	922	954	675
65°	500	551	665	753	788	497
75°	236	322	449	526	542	253
85°	46	95	116	125	130	57
90°	0	0	0	0	0	



TEST NUMBER: P391733

CATALOG NUMBER: 24CZ2-80VHE-RDP-UNV-L940-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1468.5	1468.5	1468.5	1468.5	1468.5
2.5°	1470.8	1470.8	1463.9	1468.5	1468.5
5°	1468.5	1466.2	1459.2	1466.2	1466.2
7.5°	1461.5	1459.2	1454.6	1461.5	1459.2
10°	1447.6	1447.6	1443.0	1450.0	1450.0
12.5°	1436.1	1433.7	1431.4	1440.7	1438.4
15°	1417.5	1417.5	1415.2	1426.8	1424.5
17.5°	1394.4	1396.7	1399.0	1408.3	1410.6
20°	1368.9	1373.5	1375.8	1389.7	1389.7
22.5°	1345.7	1348.0	1352.7	1366.6	1366.6
25°	1315.6	1320.2	1329.5	1341.1	1343.4
27.5°	1285.5	1287.8	1299.4	1315.6	1317.9
30°	1246.1	1253.1	1267.0	1285.5	1287.8
32.5°	1211.4	1218.3	1234.5	1253.1	1257.7
35°	1167.4	1176.6	1195.2	1218.3	1223.0
37.5°	1128.0	1135.0	1158.1	1183.6	1190.5
40°	1079.4	1093.3	1116.4	1146.5	1158.1
42.5°	1030.7	1044.6	1072.4	1111.8	1125.7
45°	979.8	996.0	1030.7	1074.7	1093.3
47.5°	928.8	947.3	986.7	1037.7	1058.5
50°	870.9	894.1	942.7	1000.6	1023.8
52.5°	815.3	843.1	896.4	961.2	991.3
55°	757.4	785.2	854.7	921.9	954.3
57.5°	692.6	729.6	806.0	882.5	917.2
60°	632.3	667.1	759.7	843.1	877.8
62.5°	567.5	613.8	713.4	801.4	836.2
65°	500.3	551.3	664.8	752.8	787.5
67.5°	440.1	495.7	616.1	704.1	738.9
70°	368.3	437.8	562.8	650.9	685.6
72.5°	301.1	377.5	507.3	593.0	625.4
75°	236.3	322.0	449.3	525.8	542.0
77.5°	176.0	266.4	389.1	421.6	410.0
80°	125.1	213.1	303.4	287.2	294.2
82.5°	81.1	162.1	187.6	213.1	220.0
85°	46.3	95.0	115.8	125.1	129.7
87.5°	20.8	34.7	46.3	46.3	44.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)