

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: P391828

Luminaire Tested: **24CZ2-90VHE-RDP-UNV-L940-CD1-SWPD1-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: P391828
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: 24CZ2-90VHE-RDP-UNV-L940-CD1-SWPD1-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: 5136.6 lumens
Efficiency: N/A
Efficacy: 83.1 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

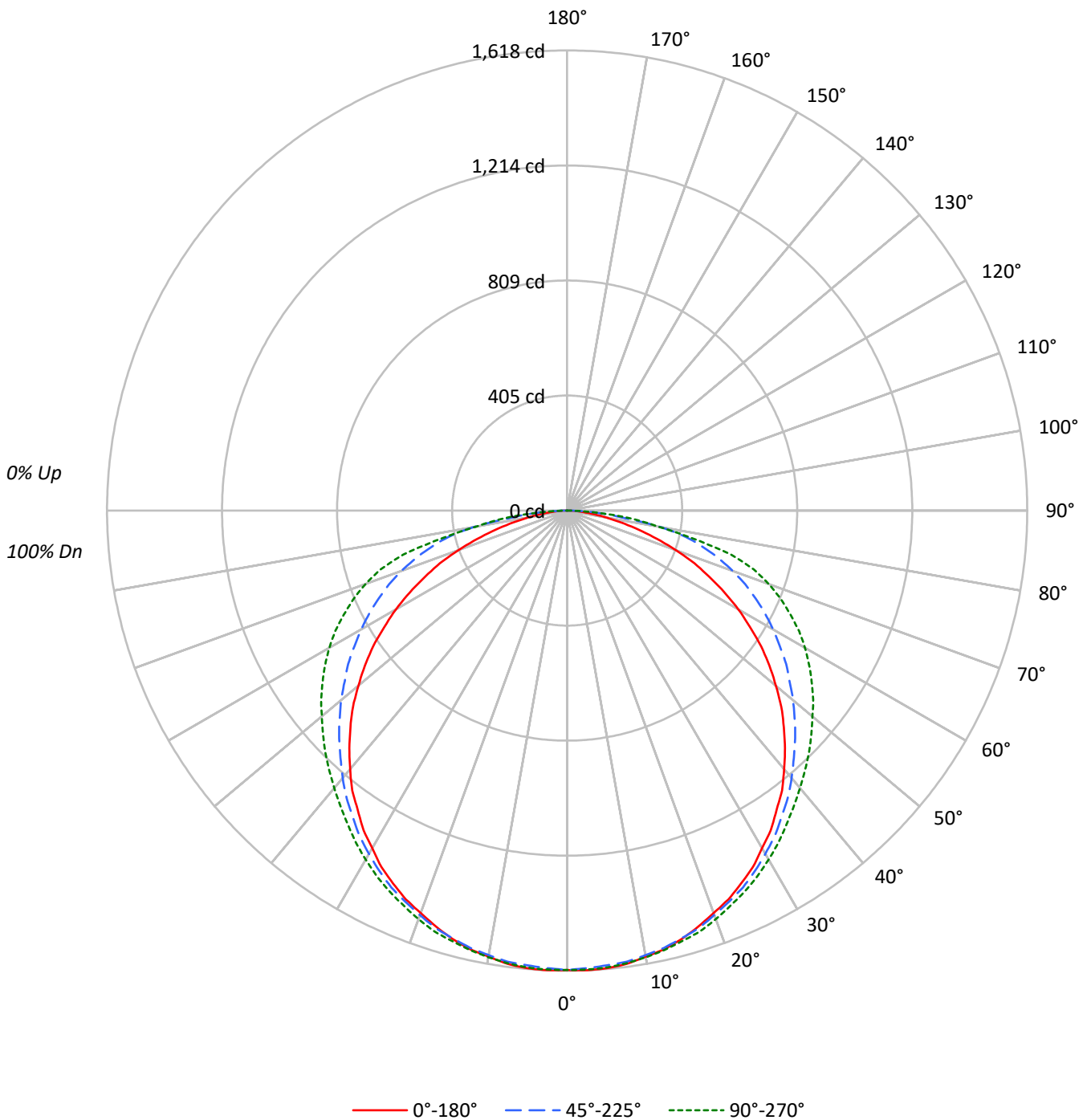
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P391828

CATALOG NUMBER: 24CZ2-90VHE-RDP-UNV-L940-CD1-SWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P391828

CATALOG NUMBER: 24CZ2-90VHE-RDP-UNV-L940-CD1-SWPD1-U

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	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2173	2173	2173
5°	2182	2168	2178
10°	2176	2169	2179
15°	2172	2168	2183
20°	2156	2167	2189
25°	2148	2171	2194
30°	2130	2165	2201
35°	2109	2159	2210
40°	2085	2157	2237
45°	2051	2157	2288
50°	2005	2171	2357
55°	1954	2205	2462
60°	1872	2249	2598
65°	1752	2328	2758
70°	1594	2436	2967
75°	1351	2570	3099
80°	1066	2586	2507
85°	787	1967	2203



TEST NUMBER: P391828

CATALOG NUMBER: 24CZ2-90VHE-RDP-UNV-L940-CD1-SWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.2	3.0
10°-20°	441.0	8.6
20°-30°	674.4	13.1
30°-40°	824.4	16.0
40°-50°	878.7	17.1
50°-60°	840.1	16.4
60°-70°	711.7	13.9
70°-80°	478.3	9.3
80°-90°	134.9	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°	1268.6	24.7
0°-40°	2093.0	40.7
0°-60°	3811.7	74.2
0°-90°	5136.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5136.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1615	1615	1615	1615	1615	
5°	1615	1613	1605	1613	1613	153
15°	1559	1559	1557	1570	1567	440
25°	1447	1452	1462	1475	1478	667
35°	1284	1294	1315	1340	1345	804
45°	1078	1096	1134	1182	1203	831
55°	833	864	940	1014	1050	742
65°	550	606	731	828	866	546
75°	260	354	494	578	596	278
85°	51	104	127	138	143	63
90°	0	0	0	0	0	



TEST NUMBER: P391828

CATALOG NUMBER: 24CZ2-90VHE-RDP-UNV-L940-CD1-SWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1615.3	1615.3	1615.3	1615.3	1615.3
2.5°	1617.9	1617.9	1610.2	1615.3	1615.3
5°	1615.3	1612.8	1605.1	1612.8	1612.8
7.5°	1607.7	1605.1	1600.0	1607.7	1605.1
10°	1592.4	1592.4	1587.3	1594.9	1594.9
12.5°	1579.6	1577.1	1574.5	1584.7	1582.2
15°	1559.3	1559.3	1556.7	1569.5	1566.9
17.5°	1533.8	1536.3	1538.9	1549.1	1551.6
20°	1505.8	1510.9	1513.4	1528.7	1528.7
22.5°	1480.3	1482.8	1487.9	1503.2	1503.2
25°	1447.2	1452.3	1462.4	1475.2	1477.7
27.5°	1414.0	1416.6	1429.3	1447.2	1449.7
30°	1370.7	1378.4	1393.7	1414.0	1416.6
32.5°	1332.5	1340.2	1358.0	1378.4	1383.5
35°	1284.1	1294.3	1314.7	1340.2	1345.2
37.5°	1240.8	1248.4	1273.9	1301.9	1309.6
40°	1187.3	1202.6	1228.0	1261.2	1273.9
42.5°	1133.8	1149.1	1179.6	1223.0	1238.2
45°	1077.7	1095.6	1133.8	1182.2	1202.6
47.5°	1021.7	1042.1	1085.4	1141.4	1164.4
50°	958.0	983.5	1037.0	1100.7	1126.1
52.5°	896.8	927.4	986.0	1057.3	1090.5
55°	833.1	863.7	940.1	1014.0	1049.7
57.5°	761.8	802.6	886.6	970.7	1008.9
60°	695.6	733.8	835.7	927.4	965.6
62.5°	624.2	675.2	784.7	881.5	919.8
65°	550.3	606.4	731.2	828.0	866.3
67.5°	484.1	545.2	677.7	774.5	812.8
70°	405.1	481.5	619.1	715.9	754.2
72.5°	331.2	415.3	558.0	652.2	687.9
75°	259.9	354.1	494.3	578.4	596.2
77.5°	193.6	293.0	428.0	463.7	451.0
80°	137.6	234.4	333.8	315.9	323.6
82.5°	89.2	178.3	206.4	234.4	242.0
85°	51.0	104.5	127.4	137.6	142.7
87.5°	22.9	38.2	51.0	51.0	48.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)