

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: P388805

Luminaire Tested: **24CZ2-40VHE-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: P388805
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: 24CZ2-40VHE-UNV-L940-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

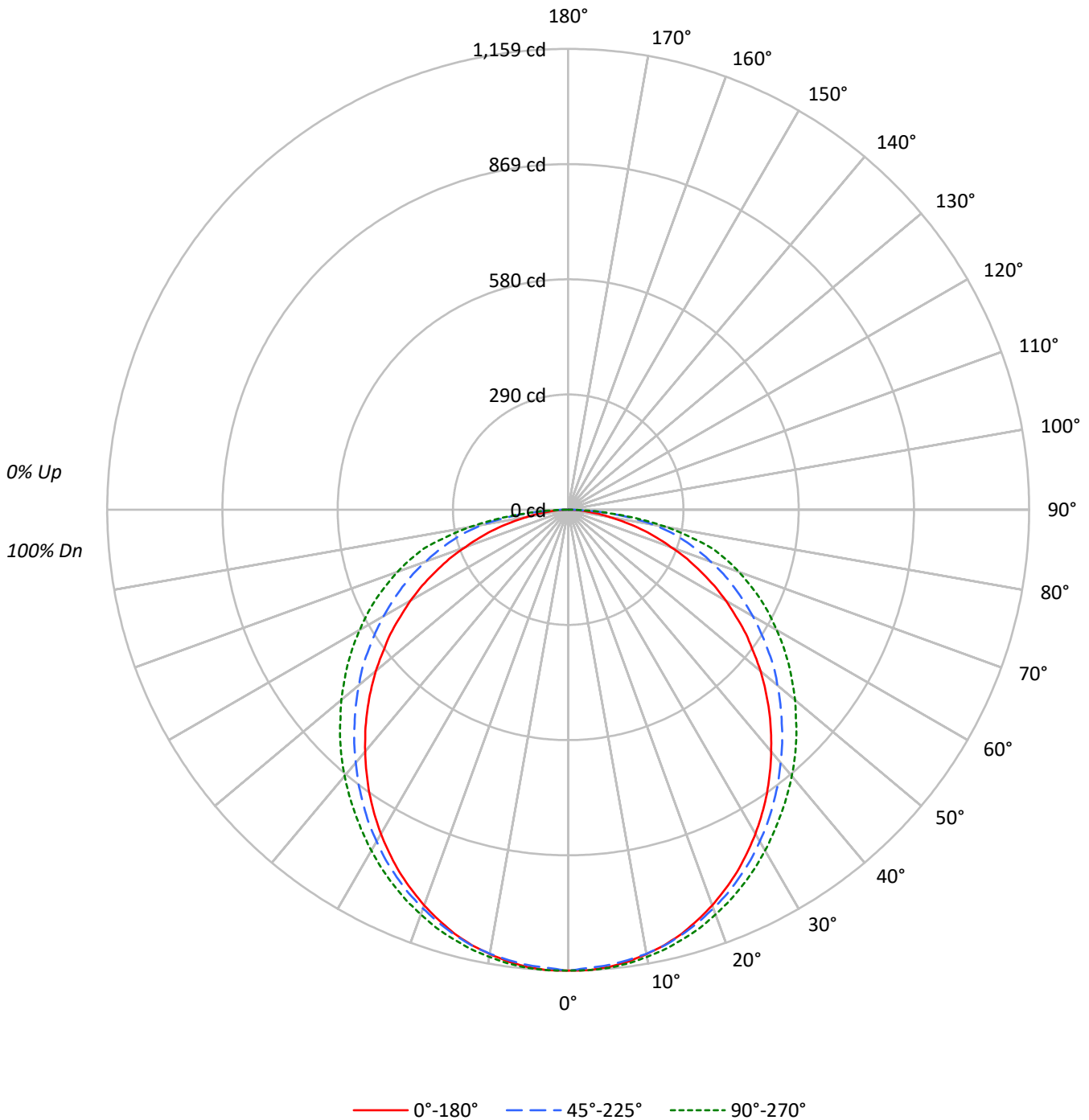
Lumens per Lamp: N/A
Luminaire Lumens: 3452.8 lumens
Efficiency: N/A
Efficacy: 131.8 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 26.2
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: P388805
CATALOG NUMBER: 24CZ2-40VHE-UNV-L940-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P388805

CATALOG NUMBER: 24CZ2-40VHE-UNV-L940-CD1-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	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°	1560	1560	1560
5°	1560	1553	1563
10°	1551	1549	1560
15°	1538	1541	1557
20°	1516	1528	1551
25°	1492	1514	1545
30°	1463	1497	1538
35°	1431	1478	1533
40°	1395	1459	1536
45°	1360	1445	1544
50°	1322	1438	1558
55°	1281	1435	1587
60°	1231	1442	1628
65°	1167	1464	1699
70°	1083	1500	1795
75°	988	1576	1947
80°	813	1696	1946
85°	622	1565	1672



TEST NUMBER: P388805

CATALOG NUMBER: 24CZ2-40VHE-UNV-L940-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.6	3.2
10°-20°	313.0	9.1
20°-30°	471.0	13.6
30°-40°	564.5	16.3
40°-50°	588.2	17.0
50°-60°	547.3	15.9
60°-70°	450.8	13.1
70°-80°	307.0	8.9
80°-90°	101.3	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°	893.7	25.9
0°-40°	1458.2	42.2
0°-60°	2593.7	75.1
0°-90°	3452.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3452.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1159	1159	1159	1159	1159	
5°	1155	1155	1150	1156	1157	110
15°	1104	1105	1106	1117	1118	311
25°	1005	1010	1020	1037	1041	463
35°	871	882	900	924	933	545
45°	714	729	759	797	811	551
55°	546	565	612	660	676	487
65°	366	398	460	514	534	364
75°	190	233	303	357	374	200
85°	40	78	101	108	108	50
90°	0	0	0	0	0	



TEST NUMBER: P388805

CATALOG NUMBER: 24CZ2-40VHE-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1159.3	1159.3	1159.3	1159.3	1159.3
2.5°	1159.3	1159.3	1153.5	1159.3	1159.3
5°	1154.7	1154.7	1150.0	1155.8	1157.0
7.5°	1146.6	1147.7	1143.1	1150.0	1151.2
10°	1135.1	1136.2	1133.9	1140.8	1142.0
12.5°	1121.2	1122.4	1122.4	1130.5	1131.6
15°	1104.0	1105.1	1106.3	1116.6	1117.8
17.5°	1082.1	1085.5	1087.8	1100.5	1102.8
20°	1059.0	1062.5	1067.1	1080.9	1083.2
22.5°	1032.5	1037.1	1045.2	1060.2	1063.6
25°	1004.9	1009.5	1019.8	1037.1	1040.6
27.5°	973.7	980.7	993.3	1011.8	1016.4
30°	941.5	948.4	963.4	983.0	989.9
32.5°	906.9	916.1	933.4	955.3	962.2
35°	871.2	881.5	900.0	924.2	933.4
37.5°	833.2	844.7	866.6	893.1	904.6
40°	794.0	807.8	830.8	862.0	874.6
42.5°	754.8	767.5	796.3	829.7	843.5
45°	714.5	729.4	759.4	797.4	811.3
47.5°	673.0	688.0	723.7	764.0	776.7
50°	631.5	646.5	686.8	729.4	744.4
52.5°	586.5	606.1	652.2	694.9	709.8
55°	546.2	564.7	611.9	660.3	676.4
57.5°	500.1	522.0	573.9	624.6	641.9
60°	457.5	480.5	535.8	587.7	605.0
62.5°	413.7	439.0	497.8	550.8	570.4
65°	366.4	397.6	459.8	513.9	533.5
67.5°	323.8	356.1	421.8	477.1	494.4
70°	275.4	314.6	381.4	436.7	456.3
72.5°	233.9	273.1	343.4	397.6	417.2
75°	190.1	232.8	303.1	357.2	374.5
77.5°	146.3	193.6	263.9	305.4	311.1
80°	104.9	154.4	218.9	243.1	251.2
82.5°	73.8	118.7	161.3	177.5	182.1
85°	40.3	78.4	101.4	108.3	108.3
87.5°	17.3	33.4	40.3	41.5	42.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)