

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: P389956

Luminaire Tested: **24CZ2-85VHE-S-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: P389956
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-85VHE-S-UNV-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7623.3 lumens
Efficiency: N/A
Efficacy: 131.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

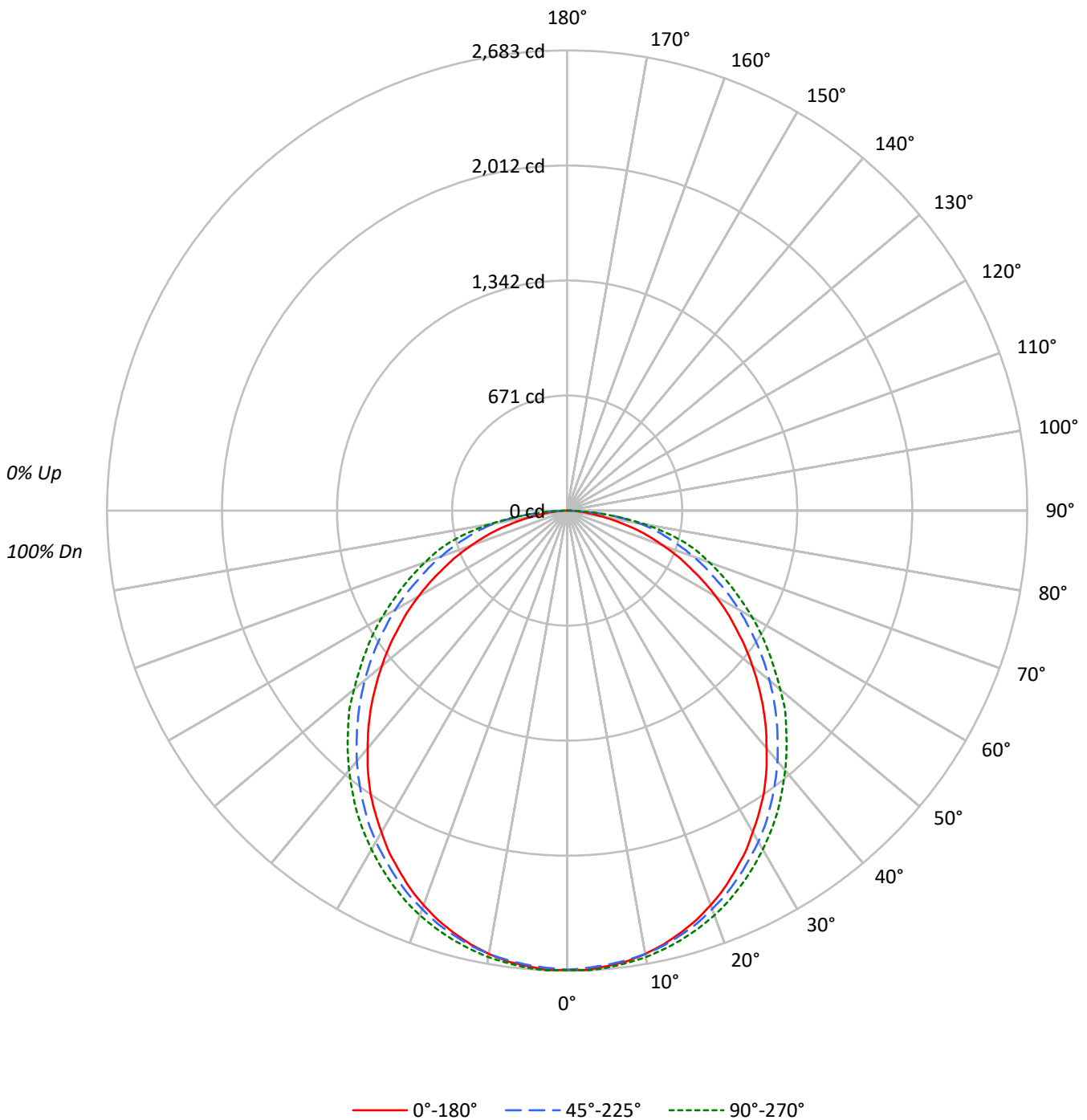
Input Watts (W): 57.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P389956

CATALOG NUMBER: 24CZ2-85VHE-S-UNV-L940-CD1-SWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P389956

CATALOG NUMBER: 24CZ2-85VHE-S-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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3603	3603	3603
5°	3601	3591	3614
10°	3586	3586	3613
15°	3552	3569	3606
20°	3505	3540	3595
25°	3440	3505	3573
30°	3363	3465	3544
35°	3289	3409	3516
40°	3177	3351	3475
45°	3073	3285	3437
50°	2955	3224	3396
55°	2823	3164	3363
60°	2691	3115	3356
65°	2521	3060	3377
70°	2334	3077	3467
75°	2090	3134	3663
80°	1688	3321	3584
85°	1271	2916	2841



TEST NUMBER: P389956

CATALOG NUMBER: 24CZ2-85VHE-S-UNV-L940-CD1-SWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	253.5	3.3
10°-20°	724.5	9.5
20°-30°	1089.0	14.3
30°-40°	1297.2	17.0
40°-50°	1327.6	17.4
50°-60°	1195.2	15.7
60°-70°	938.6	12.3
70°-80°	609.2	8.0
80°-90°	188.4	2.5
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°	2067.0	27.1
0°-40°	3364.2	44.1
0°-60°	5887.0	77.2
0°-90°	7623.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7623.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2678	2678	2678	2678	2678	
5°	2666	2671	2659	2673	2676	253
15°	2550	2557	2562	2584	2588	719
25°	2317	2337	2361	2400	2407	1068
35°	2002	2027	2075	2126	2141	1249
45°	1615	1654	1726	1792	1806	1245
55°	1204	1257	1349	1419	1434	1079
65°	792	852	961	1041	1061	788
75°	402	479	603	685	705	425
85°	82	153	189	184	184	99
90°	0	0	0	0	0	



TEST NUMBER: P389956

CATALOG NUMBER: 24CZ2-85VHE-S-UNV-L940-CD1-SWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2678.1	2678.1	2678.1	2678.1	2678.1
2.5°	2680.5	2680.5	2668.4	2680.5	2683.0
5°	2666.0	2670.9	2658.7	2673.3	2675.7
7.5°	2651.5	2651.5	2644.2	2658.7	2661.2
10°	2624.8	2627.3	2624.8	2641.8	2644.2
12.5°	2590.9	2595.8	2598.2	2615.2	2617.6
15°	2549.8	2557.0	2561.9	2583.7	2588.5
17.5°	2503.8	2511.0	2523.1	2547.4	2552.2
20°	2448.1	2457.8	2472.3	2503.8	2511.0
22.5°	2387.5	2397.2	2421.4	2450.5	2462.6
25°	2317.3	2336.7	2360.9	2399.6	2406.9
27.5°	2247.1	2264.0	2295.5	2336.7	2346.4
30°	2164.8	2191.4	2230.1	2271.3	2281.0
32.5°	2084.9	2111.5	2157.5	2201.1	2213.2
35°	2002.5	2026.7	2075.2	2126.0	2140.6
37.5°	1908.1	1939.6	1992.8	2043.7	2058.2
40°	1808.8	1847.6	1908.1	1961.4	1978.3
42.5°	1714.4	1755.5	1816.1	1874.2	1893.6
45°	1615.1	1653.8	1726.5	1791.9	1806.4
47.5°	1513.4	1557.0	1634.5	1699.9	1724.1
50°	1411.7	1457.7	1540.0	1607.8	1622.4
52.5°	1310.0	1358.4	1445.6	1518.2	1525.5
55°	1203.5	1256.7	1348.7	1419.0	1433.5
57.5°	1106.6	1152.6	1251.9	1324.5	1341.5
60°	1000.1	1050.9	1157.4	1225.2	1247.0
62.5°	898.4	951.6	1063.0	1130.8	1150.2
65°	791.8	852.3	961.3	1041.2	1060.6
67.5°	699.8	757.9	874.1	951.6	971.0
70°	593.3	658.6	782.1	862.0	881.4
72.5°	501.2	569.0	692.5	770.0	799.1
75°	402.0	479.4	602.9	685.3	704.6
77.5°	305.1	394.7	520.6	583.6	583.6
80°	217.9	312.4	428.6	457.7	462.5
82.5°	142.9	234.9	317.2	314.8	314.8
85°	82.3	152.6	188.9	184.0	184.0
87.5°	31.5	63.0	67.8	67.8	65.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)