

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: P389161

Luminaire Tested: **24CZ2-85VHE-SQR-UNV-L930-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: P389161  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-85VHE-SQR-UNV-L930-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6730.0 lumens  
Efficiency: N/A  
Efficacy: 116.2 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

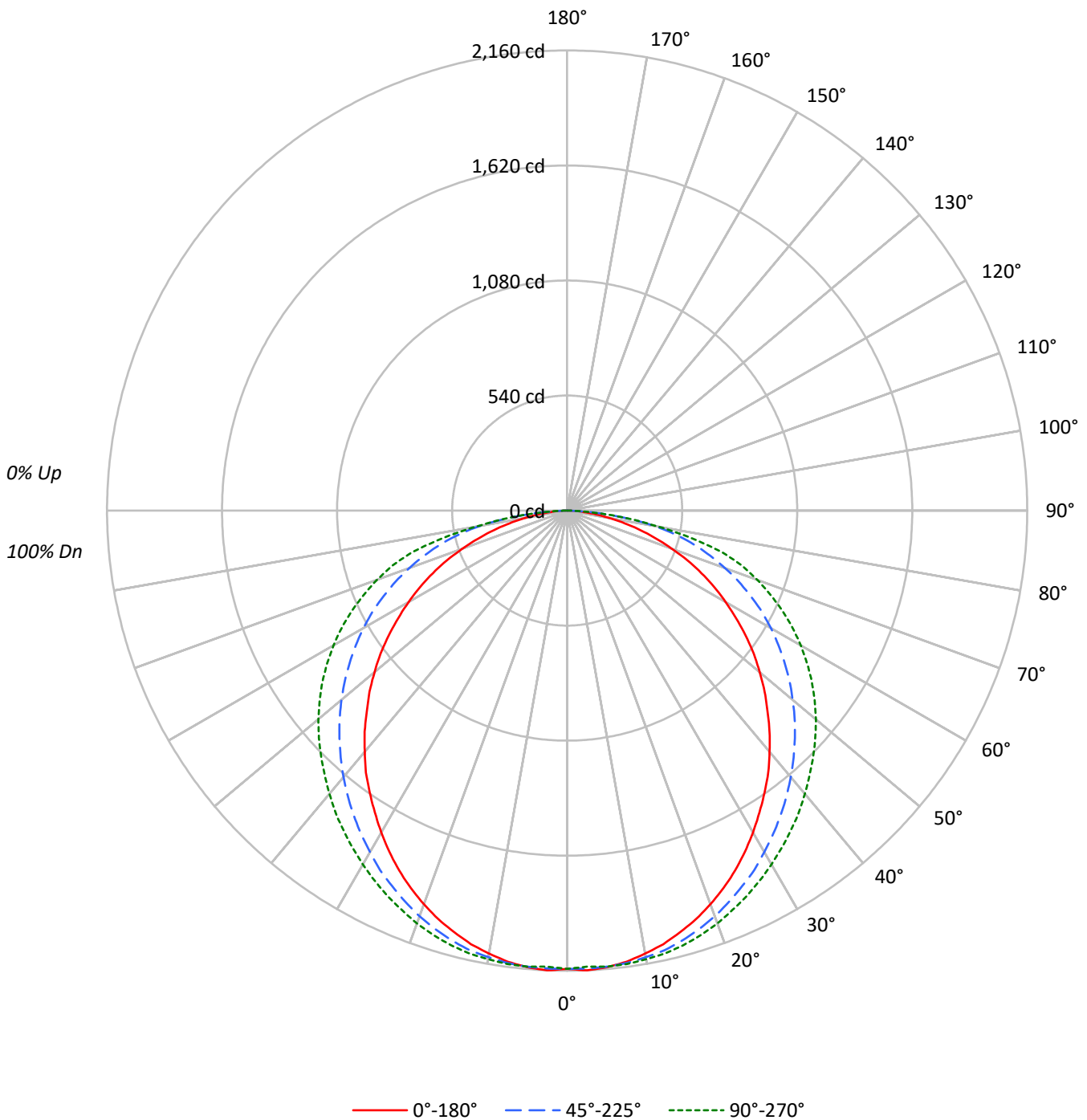
Input Watts (W): 57.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

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

	0°	45°	90°
0°	2894	2894	2894
5°	2905	2903	2903
10°	2884	2909	2921
15°	2854	2910	2941
20°	2816	2902	2953
25°	2768	2887	2963
30°	2710	2876	2980
35°	2654	2869	3008
40°	2596	2869	3049
45°	2529	2876	3108
50°	2470	2893	3191
55°	2398	2924	3290
60°	2314	2972	3409
65°	2215	3028	3552
70°	2055	3103	3733
75°	1860	3212	3905
80°	1567	3220	3358
85°	1201	2436	2436



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	204.2	3.0
10°-20°	587.5	8.7
20°-30°	892.4	13.3
30°-40°	1085.5	16.1
40°-50°	1155.7	17.2
50°-60°	1100.7	16.4
60°-70°	920.5	13.7
70°-80°	613.7	9.1
80°-90°	169.8	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°	1684.1	25.0
0°-40°	2769.6	41.2
0°-60°	5025.9	74.7
0°-90°	6730.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6730.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2151	2151	2151	2151	2151	
5°	2151	2138	2149	2149	2149	204
15°	2049	2054	2089	2105	2111	578
25°	1865	1889	1945	1978	1996	858
35°	1616	1662	1747	1804	1831	1011
45°	1329	1400	1511	1596	1633	1027
55°	1022	1111	1247	1356	1402	914
65°	696	798	951	1069	1116	687
75°	358	471	618	722	751	379
85°	78	144	158	156	158	94
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2151.2	2151.2	2151.2	2151.2	2151.2
2.5°	2160.1	2144.6	2151.2	2151.2	2142.3
5°	2151.2	2137.9	2149.0	2149.0	2149.0
7.5°	2135.7	2124.6	2142.3	2146.8	2146.8
10°	2111.2	2106.8	2129.0	2135.7	2137.9
12.5°	2084.6	2082.3	2113.5	2122.3	2129.0
15°	2049.0	2053.5	2089.0	2104.6	2111.2
17.5°	2011.2	2020.1	2060.1	2082.3	2089.0
20°	1966.8	1980.1	2026.8	2049.0	2062.3
22.5°	1917.9	1937.9	1986.8	2013.4	2029.0
25°	1864.6	1889.0	1944.6	1977.9	1995.7
27.5°	1806.8	1837.9	1902.3	1940.1	1957.9
30°	1744.5	1780.1	1851.2	1895.7	1917.9
32.5°	1680.1	1722.3	1800.1	1849.0	1875.7
35°	1615.6	1662.3	1746.8	1804.5	1831.2
37.5°	1551.2	1597.9	1691.2	1753.4	1786.8
40°	1477.9	1533.4	1633.4	1702.3	1735.7
42.5°	1406.7	1466.8	1573.4	1649.0	1684.5
45°	1329.0	1400.1	1511.2	1595.6	1633.4
47.5°	1257.9	1329.0	1449.0	1537.9	1580.1
50°	1180.1	1255.6	1382.3	1480.1	1524.5
52.5°	1104.5	1182.3	1315.6	1420.1	1464.5
55°	1022.3	1111.2	1246.7	1355.6	1402.3
57.5°	940.1	1035.6	1175.6	1289.0	1335.6
60°	860.0	957.8	1104.5	1217.8	1266.7
62.5°	780.0	877.8	1031.2	1146.7	1193.4
65°	695.6	797.8	951.2	1069.0	1115.6
67.5°	611.1	717.8	871.2	988.9	1033.4
70°	522.3	635.6	788.9	904.5	948.9
72.5°	440.0	553.4	704.5	817.8	860.0
75°	357.8	471.1	617.8	722.3	751.2
77.5°	277.8	391.1	522.3	591.1	597.8
80°	202.2	308.9	415.6	435.6	433.4
82.5°	135.6	231.1	286.7	288.9	295.6
85°	77.8	144.5	157.8	155.6	157.8
87.5°	31.1	51.1	44.4	33.3	33.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)