

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: P391007

Luminaire Tested: **24CZ2-120VHE-RDP-UNV-L930-CD2-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: P391007  
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: 24CZ2-120VHE-RDP-UNV-L930-CD2-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6776.1 lumens  
Efficiency: N/A  
Efficacy: 81.1 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

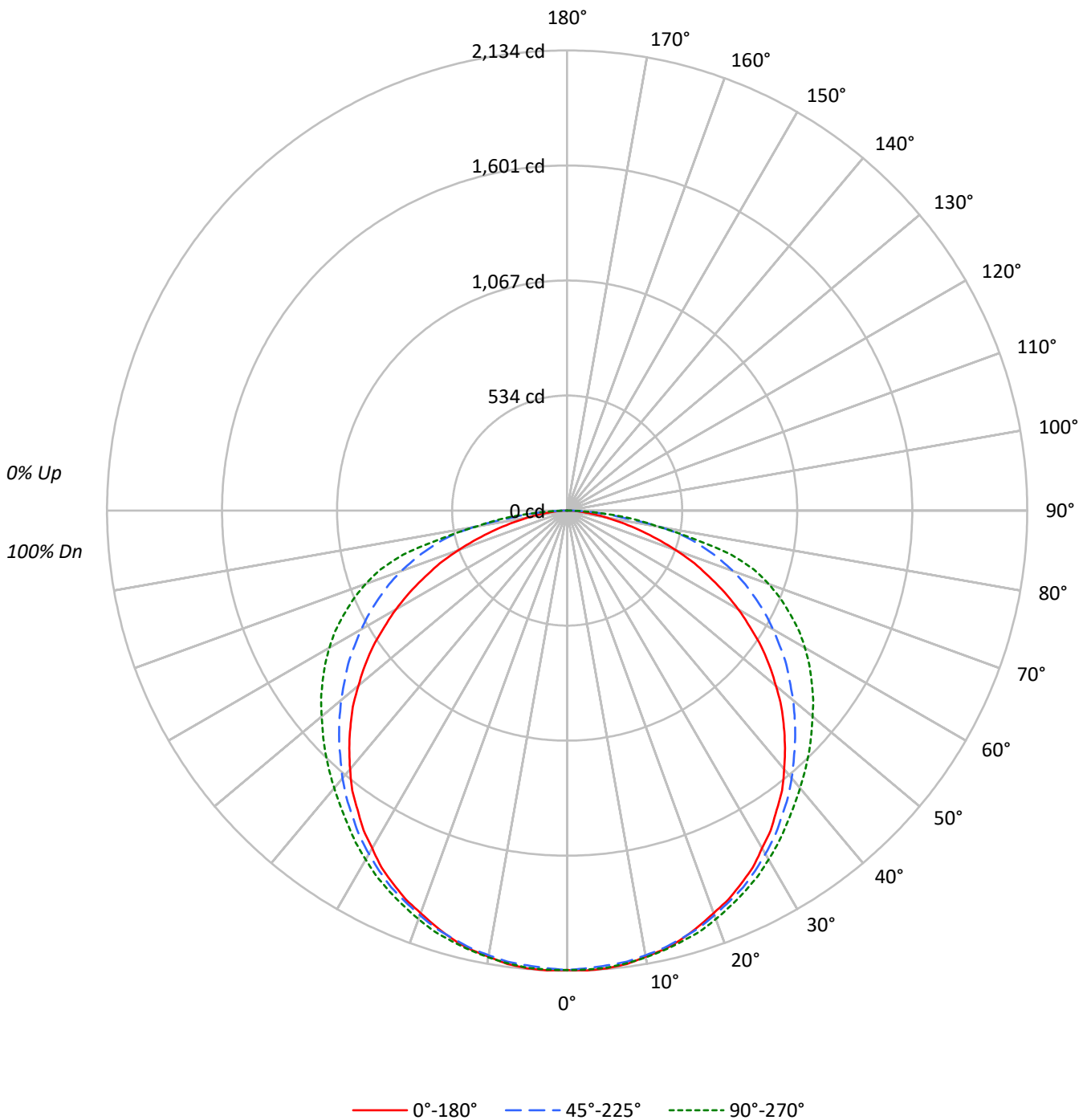
Input Watts (W): 83.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	2867	2867	2867
5°	2878	2860	2873
10°	2870	2861	2875
15°	2865	2861	2879
20°	2844	2859	2887
25°	2834	2864	2894
30°	2809	2856	2903
35°	2782	2849	2915
40°	2751	2845	2952
45°	2705	2846	3019
50°	2645	2863	3110
55°	2578	2909	3248
60°	2469	2967	3428
65°	2311	3071	3638
70°	2102	3213	3914
75°	1782	3389	4089
80°	1406	3412	3308
85°	1037	2595	2905



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	202.1	3.0
10°-20°	581.7	8.6
20°-30°	889.6	13.1
30°-40°	1087.5	16.0
40°-50°	1159.1	17.1
50°-60°	1108.2	16.4
60°-70°	938.8	13.9
70°-80°	631.0	9.3
80°-90°	178.0	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°	1673.5	24.7
0°-40°	2761.0	40.7
0°-60°	5028.3	74.2
0°-90°	6776.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6776.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2131	2131	2131	2131	2131	
5°	2131	2128	2117	2128	2128	202
15°	2057	2057	2054	2070	2067	580
25°	1909	1916	1929	1946	1949	880
35°	1694	1707	1734	1768	1775	1061
45°	1422	1445	1496	1560	1586	1097
55°	1099	1139	1240	1338	1385	979
65°	726	800	965	1092	1143	721
75°	343	467	652	763	786	367
85°	67	138	168	182	188	83
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2130.9	2130.9	2130.9	2130.9	2130.9
2.5°	2134.3	2134.3	2124.2	2130.9	2130.9
5°	2130.9	2127.5	2117.4	2127.5	2127.5
7.5°	2120.8	2117.4	2110.7	2120.8	2117.4
10°	2100.6	2100.6	2093.9	2104.0	2104.0
12.5°	2083.8	2080.5	2077.1	2090.6	2087.2
15°	2056.9	2056.9	2053.6	2070.4	2067.0
17.5°	2023.3	2026.7	2030.1	2043.5	2046.9
20°	1986.4	1993.1	1996.4	2016.6	2016.6
22.5°	1952.8	1956.1	1962.8	1983.0	1983.0
25°	1909.1	1915.8	1929.2	1946.0	1949.4
27.5°	1865.4	1868.7	1885.5	1909.1	1912.4
30°	1808.2	1818.3	1838.5	1865.4	1868.7
32.5°	1757.8	1767.9	1791.4	1818.3	1825.0
35°	1694.0	1707.4	1734.3	1767.9	1774.6
37.5°	1636.8	1646.9	1680.5	1717.5	1727.6
40°	1566.2	1586.4	1620.0	1663.7	1680.5
42.5°	1495.7	1515.8	1556.2	1613.3	1633.5
45°	1421.7	1445.2	1495.7	1559.5	1586.4
47.5°	1347.8	1374.7	1431.8	1505.7	1536.0
50°	1263.7	1297.4	1367.9	1452.0	1485.6
52.5°	1183.1	1223.4	1300.7	1394.8	1438.5
55°	1099.1	1139.4	1240.2	1337.7	1384.7
57.5°	1004.9	1058.7	1169.6	1280.6	1331.0
60°	917.6	968.0	1102.4	1223.4	1273.8
62.5°	823.5	890.7	1035.2	1162.9	1213.3
65°	726.0	799.9	964.6	1092.3	1142.7
67.5°	638.6	719.3	894.0	1021.8	1072.2
70°	534.4	635.2	816.7	944.4	994.9
72.5°	436.9	547.8	736.1	860.4	907.5
75°	342.8	467.2	652.0	763.0	786.5
77.5°	255.4	386.5	564.7	611.7	594.9
80°	181.5	309.2	440.3	416.8	426.9
82.5°	117.6	235.3	272.2	309.2	319.3
85°	67.2	137.8	168.1	181.5	188.2
87.5°	30.2	50.4	67.2	67.2	63.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)