

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: P391012

Luminaire Tested: **24CZ2-120VHE-RDP-UNV-L940-CD2-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: P391012
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-L940-CD2-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: 6928.5 lumens
Efficiency: N/A
Efficacy: 82.9 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

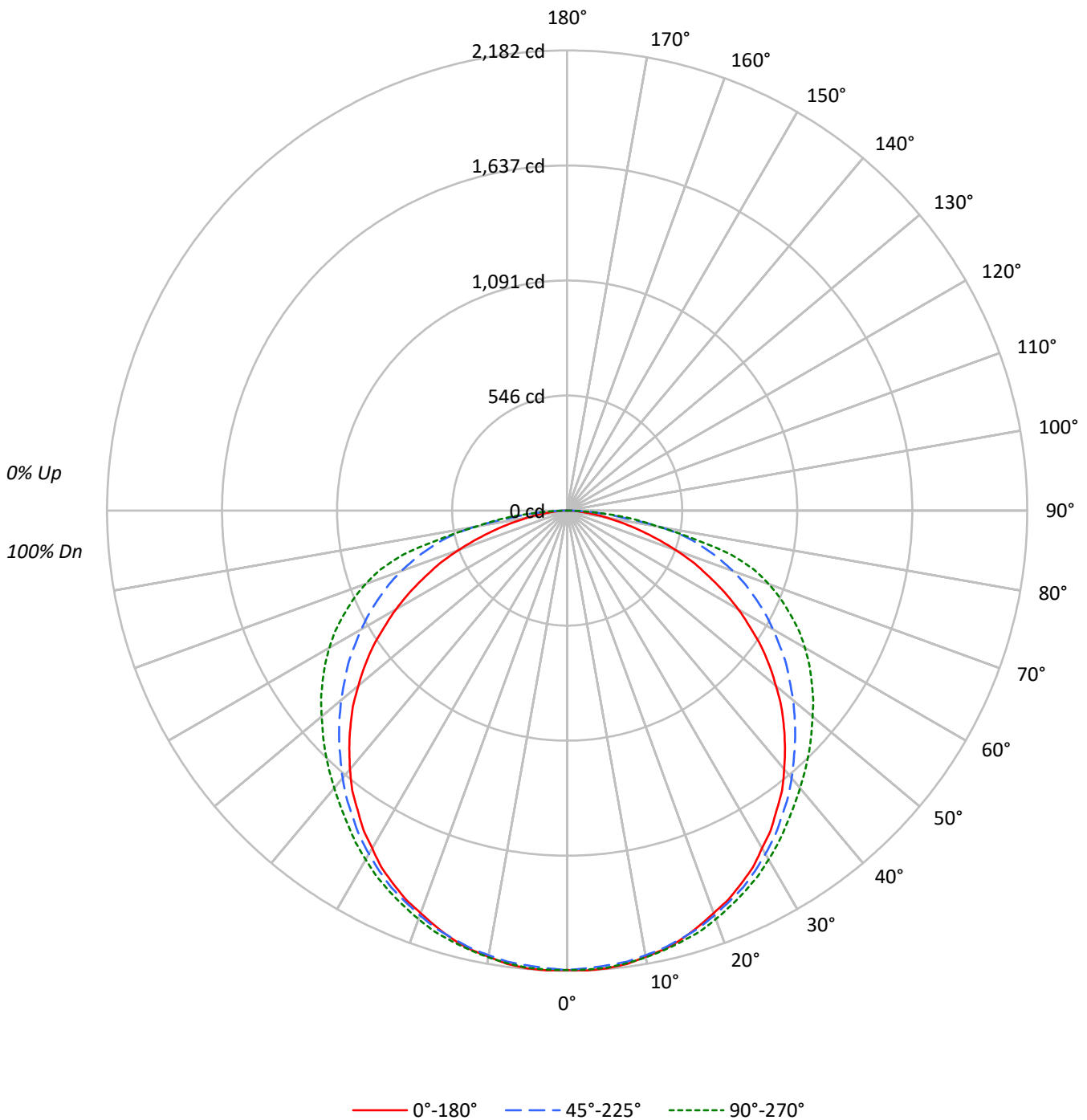
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2932	2932	2932
5°	2943	2924	2938
10°	2935	2925	2939
15°	2930	2925	2944
20°	2908	2923	2952
25°	2898	2928	2959
30°	2873	2921	2969
35°	2845	2913	2980
40°	2813	2909	3018
45°	2766	2910	3087
50°	2705	2928	3180
55°	2636	2975	3321
60°	2525	3033	3505
65°	2363	3140	3720
70°	2150	3285	4002
75°	1822	3466	4181
80°	1438	3488	3382
85°	1061	2652	2972



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	206.7	3.0
10°-20°	594.8	8.6
20°-30°	909.6	13.1
30°-40°	1112.0	16.0
40°-50°	1185.2	17.1
50°-60°	1133.2	16.4
60°-70°	959.9	13.9
70°-80°	645.2	9.3
80°-90°	182.0	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°	1711.1	24.7
0°-40°	2823.1	40.7
0°-60°	5141.4	74.2
0°-90°	6928.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6928.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2179	2179	2179	2179	2179	
5°	2179	2175	2165	2175	2175	207
15°	2103	2103	2100	2117	2114	593
25°	1952	1959	1973	1990	1993	900
35°	1732	1746	1773	1808	1814	1085
45°	1454	1478	1529	1595	1622	1121
55°	1124	1165	1268	1368	1416	1001
65°	742	818	986	1117	1168	737
75°	350	478	667	780	804	375
85°	69	141	172	186	192	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2178.8	2178.8	2178.8	2178.8	2178.8
2.5°	2182.3	2182.3	2171.9	2178.8	2178.8
5°	2178.8	2175.4	2165.1	2175.4	2175.4
7.5°	2168.5	2165.1	2158.2	2168.5	2165.1
10°	2147.9	2147.9	2141.0	2151.3	2151.3
12.5°	2130.7	2127.3	2123.8	2137.6	2134.1
15°	2103.2	2103.2	2099.8	2117.0	2113.5
17.5°	2068.8	2072.3	2075.7	2089.5	2092.9
20°	2031.0	2037.9	2041.4	2062.0	2062.0
22.5°	1996.7	2000.1	2007.0	2027.6	2027.6
25°	1952.0	1958.9	1972.6	1989.8	1993.2
27.5°	1907.3	1910.8	1927.9	1952.0	1955.4
30°	1848.9	1859.2	1879.8	1907.3	1910.8
32.5°	1797.4	1807.7	1831.7	1859.2	1866.1
35°	1732.1	1745.8	1773.3	1807.7	1814.5
37.5°	1673.6	1683.9	1718.3	1756.1	1766.4
40°	1601.5	1622.1	1656.4	1701.1	1718.3
42.5°	1529.3	1549.9	1591.2	1649.6	1670.2
45°	1453.7	1477.7	1529.3	1594.6	1622.1
47.5°	1378.1	1405.6	1464.0	1539.6	1570.5
50°	1292.2	1326.5	1398.7	1484.6	1519.0
52.5°	1209.7	1250.9	1330.0	1426.2	1470.9
55°	1123.8	1165.0	1268.1	1367.8	1415.9
57.5°	1027.5	1082.5	1195.9	1309.4	1360.9
60°	938.2	989.7	1127.2	1250.9	1302.5
62.5°	842.0	910.7	1058.5	1189.1	1240.6
65°	742.3	817.9	986.3	1116.9	1168.4
67.5°	653.0	735.4	914.1	1044.7	1096.3
70°	546.4	649.5	835.1	965.7	1017.2
72.5°	446.8	560.2	752.6	879.8	927.9
75°	350.5	477.7	666.7	780.1	804.2
77.5°	261.2	395.2	577.4	625.5	608.3
80°	185.6	316.2	450.2	426.1	436.5
82.5°	120.3	240.6	278.4	316.2	326.5
85°	68.7	140.9	171.8	185.6	192.5
87.5°	30.9	51.5	68.7	68.7	65.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)