

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: P391013

Luminaire Tested: **24CZ2-120VHE-RDP-UNV-L940-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: P391013
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-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: 7015.5 lumens
Efficiency: N/A
Efficacy: 83.9 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

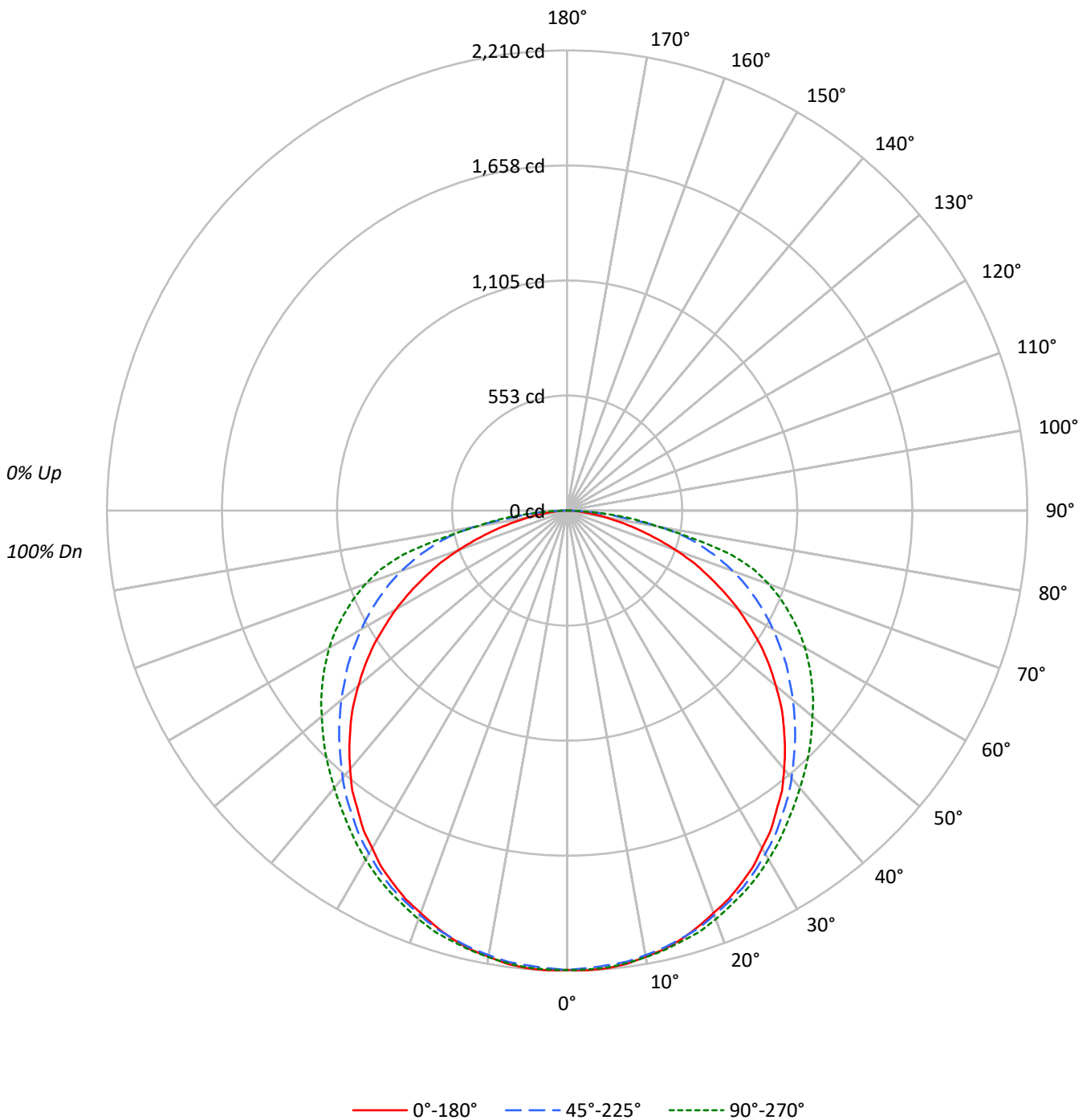
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2968	2968	2968
5°	2980	2961	2975
10°	2971	2962	2976
15°	2966	2962	2981
20°	2945	2960	2990
25°	2934	2965	2996
30°	2909	2957	3006
35°	2881	2949	3018
40°	2848	2946	3056
45°	2801	2947	3125
50°	2739	2965	3220
55°	2669	3012	3363
60°	2556	3071	3549
65°	2393	3180	3767
70°	2177	3327	4052
75°	1845	3510	4233
80°	1456	3532	3424
85°	1074	2686	3009



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.3	3.0
10°-20°	602.3	8.6
20°-30°	921.0	13.1
30°-40°	1126.0	16.0
40°-50°	1200.0	17.1
50°-60°	1147.4	16.4
60°-70°	972.0	13.9
70°-80°	653.3	9.3
80°-90°	184.3	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°	1732.6	24.7
0°-40°	2858.6	40.7
0°-60°	5206.0	74.2
0°-90°	7015.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7015.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2206	2206	2206	2206	2206	
5°	2206	2203	2192	2203	2203	210
15°	2130	2130	2126	2144	2140	600
25°	1976	1984	1997	2015	2018	911
35°	1754	1768	1796	1830	1837	1099
45°	1472	1496	1548	1615	1642	1135
55°	1138	1180	1284	1385	1434	1013
65°	752	828	999	1131	1183	746
75°	355	484	675	790	814	380
85°	70	143	174	188	195	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2206.2	2206.2	2206.2	2206.2	2206.2
2.5°	2209.7	2209.7	2199.2	2206.2	2206.2
5°	2206.2	2202.7	2192.3	2202.7	2202.7
7.5°	2195.7	2192.3	2185.3	2195.7	2192.3
10°	2174.9	2174.9	2167.9	2178.3	2178.3
12.5°	2157.5	2154.0	2150.5	2164.4	2160.9
15°	2129.6	2129.6	2126.1	2143.5	2140.1
17.5°	2094.8	2098.3	2101.8	2115.7	2119.2
20°	2056.5	2063.5	2067.0	2087.9	2087.9
22.5°	2021.7	2025.2	2032.2	2053.1	2053.1
25°	1976.5	1983.5	1997.4	2014.8	2018.3
27.5°	1931.3	1934.8	1952.2	1976.5	1980.0
30°	1872.1	1882.6	1903.4	1931.3	1934.8
32.5°	1819.9	1830.4	1854.7	1882.6	1889.5
35°	1753.8	1767.7	1795.6	1830.4	1837.3
37.5°	1694.6	1705.1	1739.9	1778.2	1788.6
40°	1621.6	1642.5	1677.2	1722.5	1739.9
42.5°	1548.5	1569.4	1611.1	1670.3	1691.2
45°	1471.9	1496.3	1548.5	1614.6	1642.5
47.5°	1395.4	1423.2	1482.4	1558.9	1590.3
50°	1308.4	1343.2	1416.3	1503.3	1538.1
52.5°	1224.9	1266.6	1346.7	1444.1	1489.3
55°	1137.9	1179.6	1284.0	1384.9	1433.7
57.5°	1040.5	1096.1	1211.0	1325.8	1378.0
60°	950.0	1002.2	1141.4	1266.6	1318.8
62.5°	852.5	922.1	1071.8	1204.0	1256.2
65°	751.6	828.2	998.7	1130.9	1183.1
67.5°	661.2	744.7	925.6	1057.9	1110.0
70°	553.3	657.7	845.6	977.8	1030.0
72.5°	452.4	567.2	762.1	890.8	939.5
75°	354.9	483.7	675.1	789.9	814.3
77.5°	264.5	400.2	584.6	633.3	615.9
80°	187.9	320.1	455.8	431.5	441.9
82.5°	121.8	243.6	281.9	320.1	330.6
85°	69.6	142.7	174.0	187.9	194.9
87.5°	31.3	52.2	69.6	69.6	66.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)