

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: P390885

Luminaire Tested: **24CZ2-100VHE-HRP-UNV-L930-CD1-SDWPD1-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: P390885  
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: 24CZ2-100VHE-HRP-UNV-L930-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

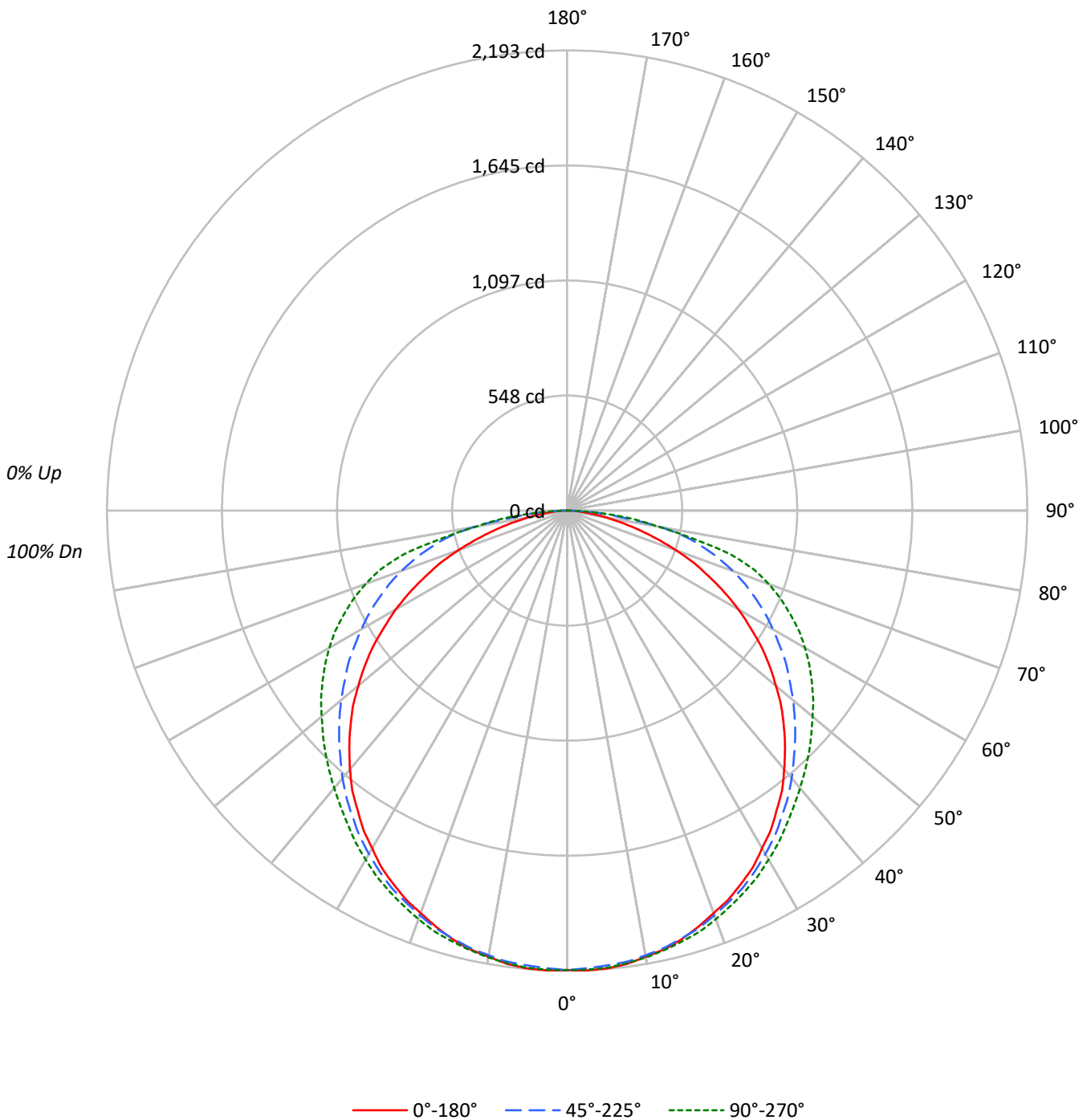
Lumens per Lamp: N/A  
Luminaire Lumens: 6963.7 lumens  
Efficiency: N/A  
Efficacy: 100.1 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 69.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	2946	2946	2946
5°	2958	2939	2953
10°	2949	2940	2954
15°	2945	2940	2959
20°	2923	2938	2967
25°	2913	2943	2974
30°	2887	2935	2984
35°	2859	2927	2996
40°	2827	2924	3033
45°	2780	2925	3102
50°	2718	2943	3196
55°	2650	2990	3338
60°	2538	3049	3523
65°	2375	3156	3739
70°	2161	3302	4022
75°	1831	3484	4202
80°	1445	3506	3399
85°	1067	2666	2986



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	207.7	3.0
10°-20°	597.8	8.6
20°-30°	914.2	13.1
30°-40°	1117.6	16.0
40°-50°	1191.2	17.1
50°-60°	1138.9	16.4
60°-70°	964.8	13.9
70°-80°	648.4	9.3
80°-90°	182.9	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°	1719.8	24.7
0°-40°	2837.5	40.7
0°-60°	5167.6	74.2
0°-90°	6963.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6963.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2190	2190	2190	2190	2190	
5°	2190	2186	2176	2186	2186	208
15°	2114	2114	2110	2128	2124	596
25°	1962	1969	1983	2000	2003	904
35°	1741	1755	1782	1817	1824	1091
45°	1461	1485	1537	1603	1630	1127
55°	1130	1171	1275	1375	1423	1006
65°	746	822	991	1123	1174	741
75°	352	480	670	784	808	377
85°	69	142	173	186	193	85
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2189.9	2189.9	2189.9	2189.9	2189.9
2.5°	2193.3	2193.3	2183.0	2189.9	2189.9
5°	2189.9	2186.4	2176.1	2186.4	2186.4
7.5°	2179.5	2176.1	2169.2	2179.5	2176.1
10°	2158.8	2158.8	2151.9	2162.3	2162.3
12.5°	2141.5	2138.1	2134.6	2148.4	2145.0
15°	2113.9	2113.9	2110.4	2127.7	2124.3
17.5°	2079.4	2082.8	2086.3	2100.1	2103.5
20°	2041.4	2048.3	2051.7	2072.4	2072.4
22.5°	2006.8	2010.3	2017.2	2037.9	2037.9
25°	1961.9	1968.8	1982.6	1999.9	2003.4
27.5°	1917.0	1920.5	1937.7	1961.9	1965.4
30°	1858.3	1868.7	1889.4	1917.0	1920.5
32.5°	1806.5	1816.8	1841.0	1868.7	1875.6
35°	1740.9	1754.7	1782.3	1816.8	1823.8
37.5°	1682.1	1692.5	1727.0	1765.0	1775.4
40°	1609.6	1630.3	1664.9	1709.8	1727.0
42.5°	1537.1	1557.8	1599.2	1658.0	1678.7
45°	1461.1	1485.3	1537.1	1602.7	1630.3
47.5°	1385.1	1412.7	1471.4	1547.4	1578.5
50°	1298.7	1333.3	1405.8	1492.2	1526.7
52.5°	1215.8	1257.3	1336.7	1433.4	1478.3
55°	1129.5	1170.9	1274.6	1374.7	1423.1
57.5°	1032.8	1088.0	1202.0	1316.0	1367.8
60°	943.0	994.8	1132.9	1257.3	1309.1
62.5°	846.2	915.3	1063.9	1195.1	1246.9
65°	746.1	822.1	991.3	1122.6	1174.4
67.5°	656.3	739.2	918.8	1050.0	1101.9
70°	549.2	652.8	839.3	970.6	1022.4
72.5°	449.0	563.0	756.4	884.2	932.6
75°	352.3	480.1	670.1	784.1	808.3
77.5°	262.5	397.2	580.3	628.6	611.4
80°	186.5	317.8	452.5	428.3	438.7
82.5°	120.9	241.8	279.8	317.8	328.1
85°	69.1	141.6	172.7	186.5	193.4
87.5°	31.1	51.8	69.1	69.1	65.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)