

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: P391749

Luminaire Tested: **24CZ2-85VHE-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: P391749  
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: 24CZ2-85VHE-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: 5876.5 lumens  
Efficiency: N/A  
Efficacy: 101.5 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

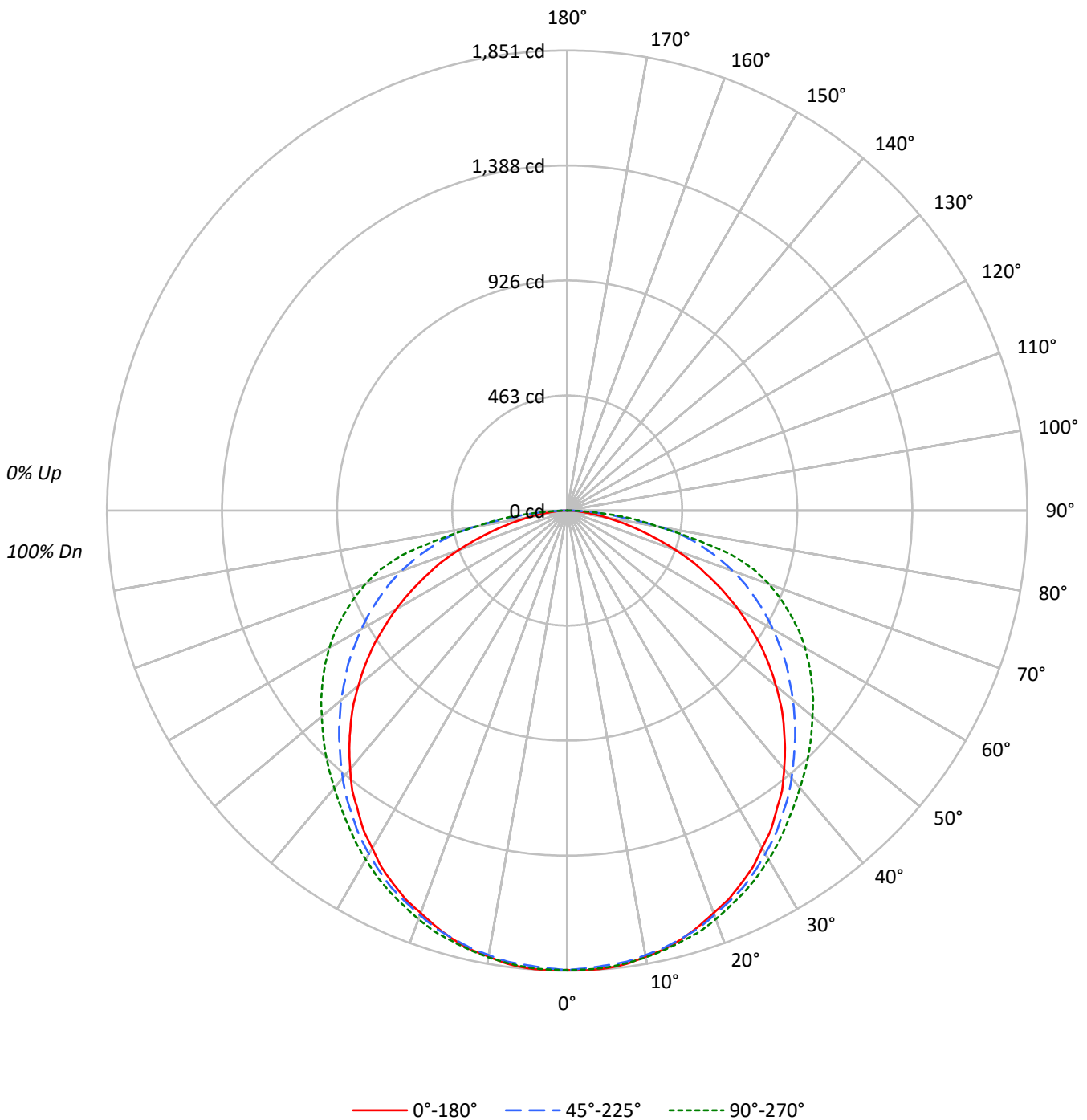
Input Watts (W): 57.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	2486	2486	2486
5°	2496	2480	2492
10°	2489	2481	2493
15°	2485	2481	2497
20°	2467	2479	2504
25°	2458	2484	2510
30°	2436	2477	2518
35°	2413	2470	2528
40°	2386	2468	2560
45°	2346	2468	2618
50°	2294	2483	2697
55°	2236	2523	2817
60°	2141	2573	2973
65°	2004	2663	3155
70°	1823	2786	3394
75°	1546	2940	3546
80°	1220	2958	2868
85°	900	2249	2519



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	175.3	3.0
10°-20°	504.5	8.6
20°-30°	771.5	13.1
30°-40°	943.1	16.0
40°-50°	1005.2	17.1
50°-60°	961.1	16.4
60°-70°	814.2	13.9
70°-80°	547.2	9.3
80°-90°	154.3	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°	1451.3	24.7
0°-40°	2394.5	40.7
0°-60°	4360.8	74.2
0°-90°	5876.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5876.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1848	1848	1848	1848	1848	
5°	1848	1845	1836	1845	1845	176
15°	1784	1784	1781	1796	1793	503
25°	1656	1661	1673	1688	1691	763
35°	1469	1481	1504	1533	1539	920
45°	1233	1253	1297	1352	1376	951
55°	953	988	1076	1160	1201	849
65°	630	694	837	947	991	625
75°	297	405	566	662	682	318
85°	58	120	146	157	163	72
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1848.0	1848.0	1848.0	1848.0	1848.0
2.5°	1850.9	1850.9	1842.2	1848.0	1848.0
5°	1848.0	1845.1	1836.3	1845.1	1845.1
7.5°	1839.2	1836.3	1830.5	1839.2	1836.3
10°	1821.8	1821.8	1815.9	1824.7	1824.7
12.5°	1807.2	1804.3	1801.4	1813.0	1810.1
15°	1783.9	1783.9	1781.0	1795.5	1792.6
17.5°	1754.7	1757.6	1760.5	1772.2	1775.1
20°	1722.7	1728.5	1731.4	1748.9	1748.9
22.5°	1693.5	1696.4	1702.3	1719.7	1719.7
25°	1655.6	1661.4	1673.1	1687.7	1690.6
27.5°	1617.7	1620.6	1635.2	1655.6	1658.5
30°	1568.2	1576.9	1594.4	1617.7	1620.6
32.5°	1524.4	1533.2	1553.6	1576.9	1582.7
35°	1469.1	1480.7	1504.0	1533.2	1539.0
37.5°	1419.5	1428.3	1457.4	1489.5	1498.2
40°	1358.3	1375.8	1404.9	1442.8	1457.4
42.5°	1297.1	1314.6	1349.6	1399.1	1416.6
45°	1233.0	1253.4	1297.1	1352.5	1375.8
47.5°	1168.8	1192.2	1241.7	1305.8	1332.1
50°	1096.0	1125.1	1186.3	1259.2	1288.3
52.5°	1026.0	1061.0	1128.0	1209.6	1247.5
55°	953.1	988.1	1075.6	1160.1	1200.9
57.5°	871.5	918.2	1014.4	1110.5	1154.3
60°	795.7	839.5	956.1	1061.0	1104.7
62.5°	714.1	772.4	897.8	1008.5	1052.2
65°	629.6	693.7	836.6	947.3	991.0
67.5°	553.8	623.8	775.3	886.1	929.8
70°	463.5	550.9	708.3	819.1	862.8
72.5°	378.9	475.1	638.3	746.2	787.0
75°	297.3	405.2	565.5	661.7	682.1
77.5°	221.5	335.2	489.7	530.5	515.9
80°	157.4	268.2	381.8	361.4	370.2
82.5°	102.0	204.0	236.1	268.2	276.9
85°	58.3	119.5	145.7	157.4	163.2
87.5°	26.2	43.7	58.3	58.3	55.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)