

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: P391758

Luminaire Tested: **24CZ2-85VHE-HRP-UNV-L950-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: P391758  
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-L950-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6457.9 lumens  
Efficiency: N/A  
Efficacy: 111.5 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

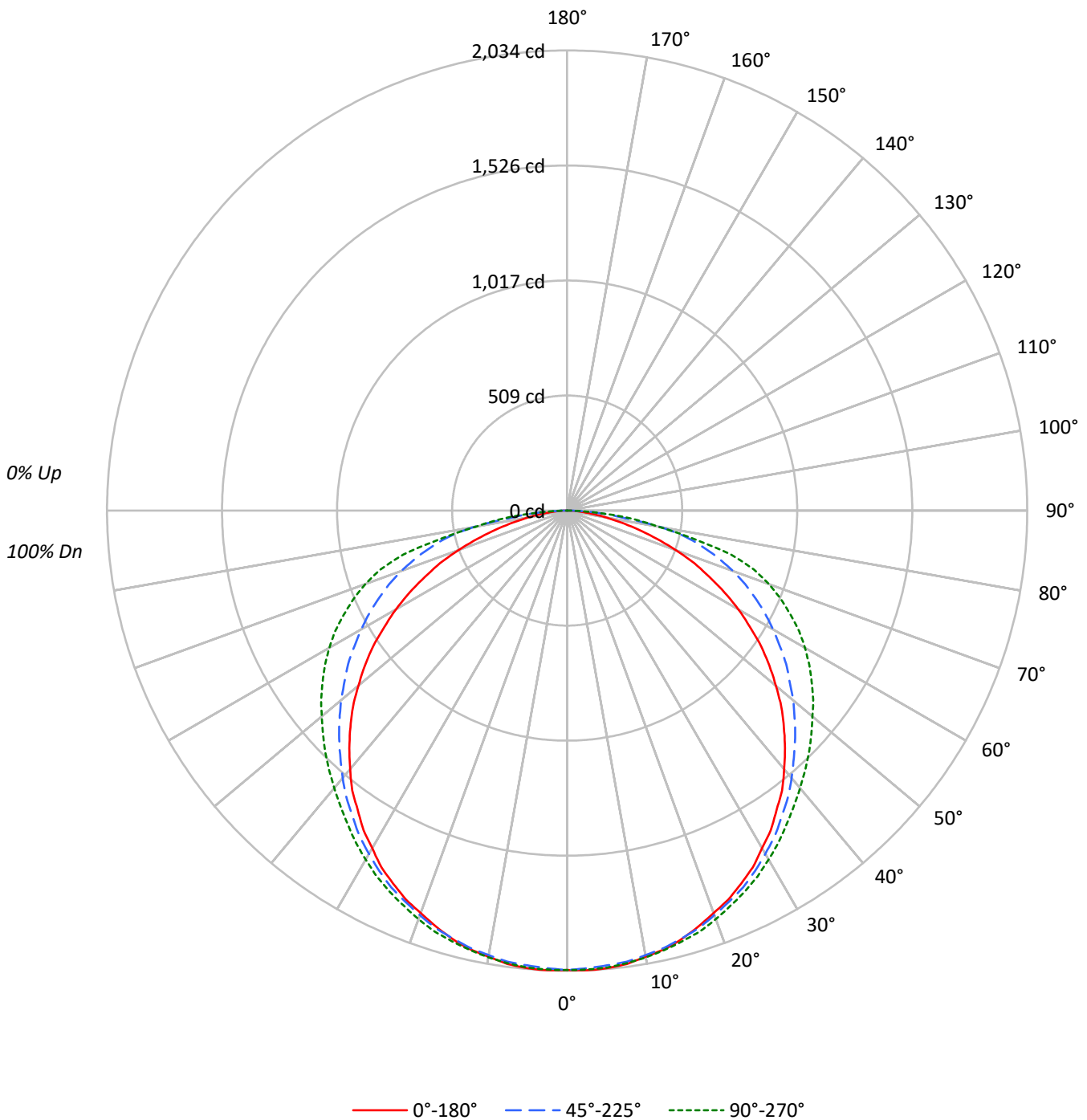
Input Watts (W): 57.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	2732	2732	2732
5°	2743	2726	2739
10°	2735	2726	2740
15°	2731	2726	2744
20°	2711	2724	2752
25°	2701	2730	2758
30°	2677	2722	2767
35°	2652	2715	2778
40°	2622	2712	2813
45°	2578	2712	2877
50°	2521	2729	2964
55°	2457	2773	3096
60°	2353	2827	3267
65°	2203	2927	3467
70°	2004	3062	3730
75°	1698	3230	3896
80°	1340	3251	3152
85°	990	2473	2770



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	192.6	3.0
10°-20°	554.4	8.6
20°-30°	847.8	13.1
30°-40°	1036.5	16.0
40°-50°	1104.7	17.1
50°-60°	1056.2	16.4
60°-70°	894.7	13.9
70°-80°	601.3	9.3
80°-90°	169.6	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°	1594.9	24.7
0°-40°	2631.4	40.7
0°-60°	4792.2	74.2
0°-90°	6457.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6457.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2031	2031	2031	2031	2031	
5°	2031	2028	2018	2028	2028	193
15°	1960	1960	1957	1973	1970	553
25°	1819	1826	1839	1855	1858	839
35°	1614	1627	1653	1685	1691	1011
45°	1355	1377	1425	1486	1512	1045
55°	1047	1086	1182	1275	1320	933
65°	692	762	919	1041	1089	687
75°	327	445	621	727	750	350
85°	64	131	160	173	179	79
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2030.8	2030.8	2030.8	2030.8	2030.8
2.5°	2034.0	2034.0	2024.4	2030.8	2030.8
5°	2030.8	2027.6	2018.0	2027.6	2027.6
7.5°	2021.2	2018.0	2011.6	2021.2	2018.0
10°	2002.0	2002.0	1995.6	2005.2	2005.2
12.5°	1986.0	1982.8	1979.6	1992.4	1989.2
15°	1960.4	1960.4	1957.2	1973.2	1970.0
17.5°	1928.3	1931.5	1934.7	1947.5	1950.7
20°	1893.1	1899.5	1902.7	1921.9	1921.9
22.5°	1861.1	1864.3	1870.7	1889.9	1889.9
25°	1819.4	1825.8	1838.6	1854.6	1857.9
27.5°	1777.8	1781.0	1797.0	1819.4	1822.6
30°	1723.3	1732.9	1752.1	1777.8	1781.0
32.5°	1675.3	1684.9	1707.3	1732.9	1739.3
35°	1614.4	1627.2	1652.8	1684.9	1691.3
37.5°	1560.0	1569.6	1601.6	1636.8	1646.4
40°	1492.7	1511.9	1543.9	1585.6	1601.6
42.5°	1425.4	1444.6	1483.1	1537.5	1556.8
45°	1355.0	1377.4	1425.4	1486.3	1511.9
47.5°	1284.5	1310.1	1364.6	1435.0	1463.9
50°	1204.4	1236.4	1303.7	1383.8	1415.8
52.5°	1127.5	1166.0	1239.6	1329.3	1371.0
55°	1047.4	1085.9	1182.0	1274.9	1319.7
57.5°	957.8	1009.0	1114.7	1220.4	1268.5
60°	874.5	922.5	1050.6	1166.0	1214.0
62.5°	784.8	848.8	986.6	1108.3	1156.4
65°	691.9	762.4	919.3	1041.0	1089.1
67.5°	608.6	685.5	852.0	973.8	1021.8
70°	509.3	605.4	778.4	900.1	948.1
72.5°	416.4	522.1	701.5	820.0	864.9
75°	326.7	445.2	621.4	727.1	749.5
77.5°	243.4	368.4	538.1	583.0	567.0
80°	173.0	294.7	419.6	397.2	406.8
82.5°	112.1	224.2	259.5	294.7	304.3
85°	64.1	131.3	160.2	173.0	179.4
87.5°	28.8	48.0	64.1	64.1	60.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)