

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: P391756

Luminaire Tested: **24CZ2-85VHE-HRP-UNV-L940-CD1-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: P391756
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-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6158.4 lumens
Efficiency: N/A
Efficacy: 106.4 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

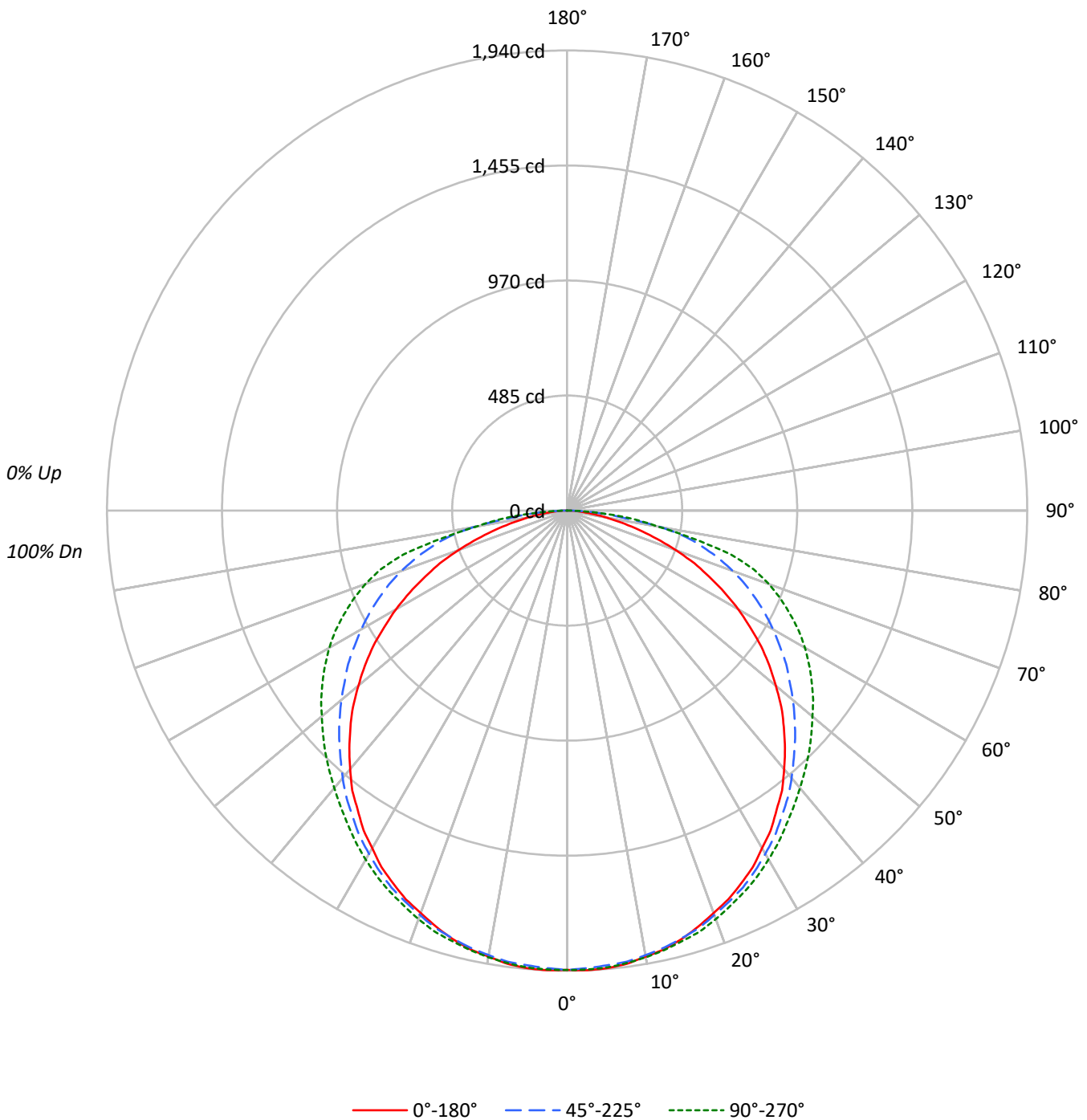
Input Watts (W): 57.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2606	2606	2606
5°	2616	2599	2612
10°	2608	2600	2613
15°	2604	2600	2617
20°	2585	2598	2624
25°	2576	2603	2630
30°	2553	2596	2639
35°	2529	2589	2649
40°	2500	2586	2683
45°	2459	2586	2743
50°	2404	2602	2826
55°	2343	2644	2952
60°	2244	2696	3115
65°	2101	2791	3307
70°	1911	2920	3557
75°	1620	3081	3716
80°	1278	3101	3006
85°	943	2357	2641



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.7	3.0
10°-20°	528.7	8.6
20°-30°	808.5	13.1
30°-40°	988.4	16.0
40°-50°	1053.4	17.1
50°-60°	1007.2	16.4
60°-70°	853.2	13.9
70°-80°	573.5	9.3
80°-90°	161.8	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°	1520.9	24.7
0°-40°	2509.3	40.7
0°-60°	4569.9	74.2
0°-90°	6158.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6158.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1937	1937	1937	1937	1937	
5°	1937	1934	1924	1934	1934	184
15°	1869	1869	1866	1882	1879	527
25°	1735	1741	1753	1769	1772	800
35°	1540	1552	1576	1607	1613	964
45°	1292	1314	1359	1417	1442	997
55°	999	1036	1127	1216	1258	890
65°	660	727	877	993	1039	655
75°	312	425	593	693	715	334
85°	61	125	153	165	171	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1936.6	1936.6	1936.6	1936.6	1936.6
2.5°	1939.7	1939.7	1930.5	1936.6	1936.6
5°	1936.6	1933.6	1924.4	1933.6	1933.6
7.5°	1927.5	1924.4	1918.3	1927.5	1924.4
10°	1909.1	1909.1	1903.0	1912.2	1912.2
12.5°	1893.9	1890.8	1887.8	1900.0	1896.9
15°	1869.4	1869.4	1866.4	1881.7	1878.6
17.5°	1838.9	1841.9	1845.0	1857.2	1860.3
20°	1805.3	1811.4	1814.5	1832.8	1832.8
22.5°	1774.7	1777.8	1783.9	1802.2	1802.2
25°	1735.0	1741.1	1753.4	1768.6	1771.7
27.5°	1695.3	1698.4	1713.7	1735.0	1738.1
30°	1643.4	1652.6	1670.9	1695.3	1698.4
32.5°	1597.6	1606.7	1628.1	1652.6	1658.7
35°	1539.5	1551.8	1576.2	1606.7	1612.8
37.5°	1487.6	1496.8	1527.3	1560.9	1570.1
40°	1423.5	1441.8	1472.3	1512.0	1527.3
42.5°	1359.3	1377.6	1414.3	1466.2	1484.6
45°	1292.1	1313.5	1359.3	1417.4	1441.8
47.5°	1224.9	1249.3	1301.3	1368.5	1396.0
50°	1148.5	1179.1	1243.2	1319.6	1350.2
52.5°	1075.2	1111.9	1182.1	1267.7	1307.4
55°	998.9	1035.5	1127.2	1215.7	1258.5
57.5°	913.3	962.2	1063.0	1163.8	1209.6
60°	833.9	879.7	1001.9	1111.9	1157.7
62.5°	748.4	809.5	940.8	1056.9	1102.7
65°	659.8	727.0	876.7	992.8	1038.6
67.5°	580.4	653.7	812.5	928.6	974.4
70°	485.7	577.3	742.3	858.4	904.2
72.5°	397.1	497.9	669.0	782.0	824.8
75°	311.6	424.6	592.6	693.4	714.8
77.5°	232.2	351.3	513.2	555.9	540.7
80°	165.0	281.0	400.2	378.8	387.9
82.5°	106.9	213.8	247.4	281.0	290.2
85°	61.1	125.2	152.7	165.0	171.1
87.5°	27.5	45.8	61.1	61.1	58.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)