

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: P391799

Luminaire Tested: **24CZ2-90VHE-HRP-UNV-L930-CD1-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: P391799
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: 24CZ2-90VHE-HRP-UNV-L930-CD1-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: 6340.2 lumens
Efficiency: N/A
Efficacy: 102.6 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

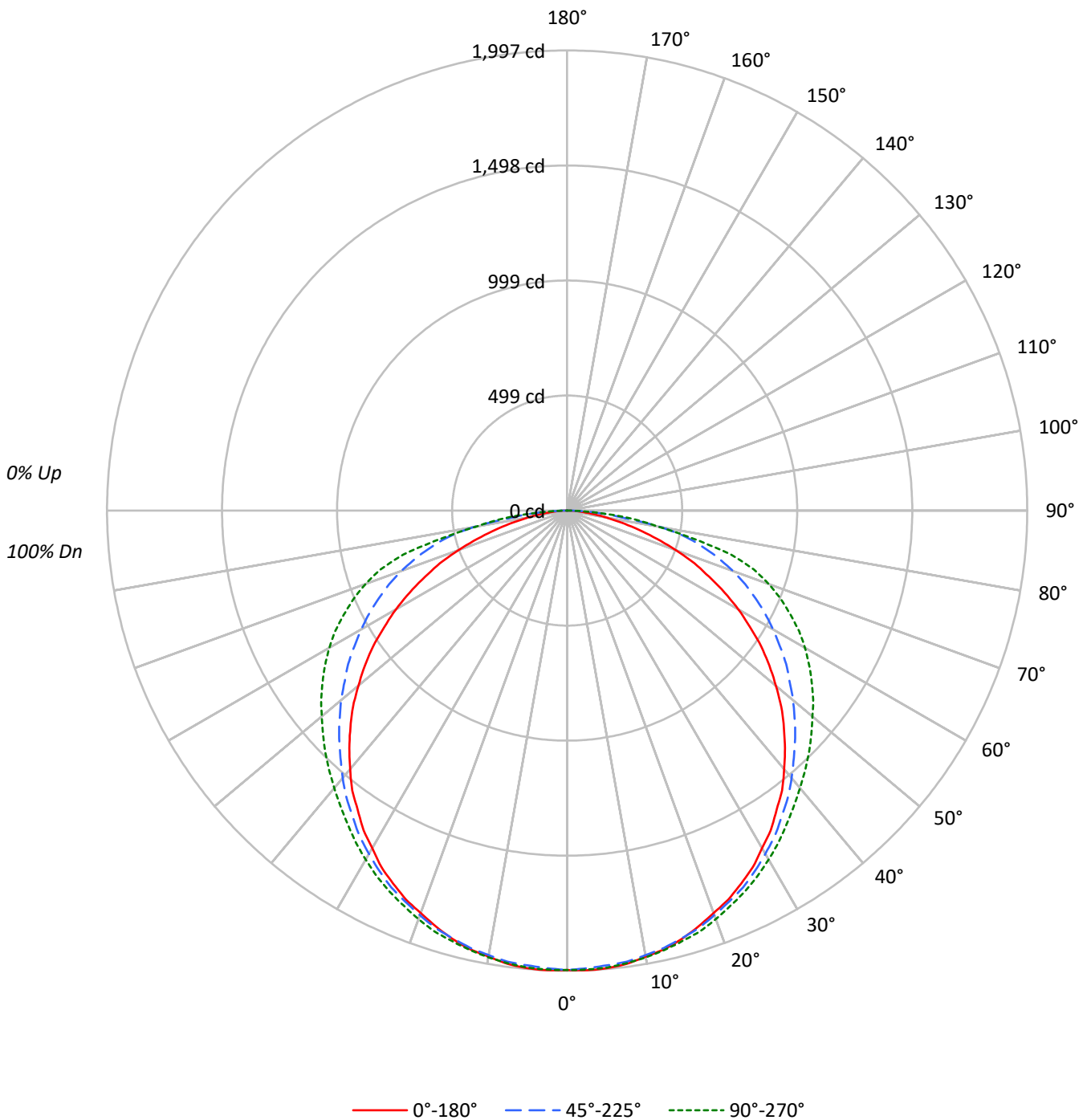
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2683	2683	2683
5°	2693	2676	2689
10°	2685	2677	2690
15°	2681	2677	2694
20°	2661	2675	2702
25°	2652	2680	2708
30°	2629	2673	2717
35°	2603	2665	2727
40°	2574	2662	2762
45°	2531	2663	2825
50°	2475	2679	2910
55°	2412	2722	3039
60°	2310	2776	3207
65°	2163	2874	3404
70°	1967	3006	3662
75°	1668	3172	3826
80°	1316	3192	3095
85°	971	2427	2719



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.1	3.0
10°-20°	544.3	8.6
20°-30°	832.4	13.1
30°-40°	1017.6	16.0
40°-50°	1084.5	17.1
50°-60°	1036.9	16.4
60°-70°	878.4	13.9
70°-80°	590.4	9.3
80°-90°	166.5	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°	1565.8	24.7
0°-40°	2583.4	40.7
0°-60°	4704.9	74.2
0°-90°	6340.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6340.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1994	1994	1994	1994	1994	
5°	1994	1991	1981	1991	1991	189
15°	1925	1925	1922	1937	1934	543
25°	1786	1792	1805	1821	1824	823
35°	1585	1598	1623	1654	1660	993
45°	1330	1352	1399	1459	1484	1026
55°	1028	1066	1160	1252	1296	916
65°	679	748	903	1022	1069	674
75°	321	437	610	714	736	343
85°	63	129	157	170	176	78
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1993.8	1993.8	1993.8	1993.8	1993.8
2.5°	1997.0	1997.0	1987.5	1993.8	1993.8
5°	1993.8	1990.7	1981.2	1990.7	1990.7
7.5°	1984.4	1981.2	1974.9	1984.4	1981.2
10°	1965.5	1965.5	1959.2	1968.7	1968.7
12.5°	1949.8	1946.6	1943.5	1956.1	1952.9
15°	1924.6	1924.6	1921.5	1937.2	1934.1
17.5°	1893.2	1896.3	1899.5	1912.0	1915.2
20°	1858.6	1864.9	1868.0	1886.9	1886.9
22.5°	1827.1	1830.3	1836.6	1855.4	1855.4
25°	1786.3	1792.5	1805.1	1820.8	1824.0
27.5°	1745.4	1748.5	1764.2	1786.3	1789.4
30°	1691.9	1701.3	1720.2	1745.4	1748.5
32.5°	1644.7	1654.2	1676.2	1701.3	1707.6
35°	1585.0	1597.6	1622.7	1654.2	1660.5
37.5°	1531.5	1541.0	1572.4	1607.0	1616.4
40°	1465.5	1484.4	1515.8	1556.7	1572.4
42.5°	1399.4	1418.3	1456.0	1509.5	1528.4
45°	1330.3	1352.3	1399.4	1459.2	1484.4
47.5°	1261.1	1286.2	1339.7	1408.9	1437.2
50°	1182.4	1213.9	1279.9	1358.6	1390.0
52.5°	1107.0	1144.7	1217.0	1305.1	1346.0
55°	1028.4	1066.1	1160.4	1251.6	1295.7
57.5°	940.3	990.6	1094.4	1198.2	1245.3
60°	858.5	905.7	1031.5	1144.7	1191.9
62.5°	770.5	833.4	968.6	1088.1	1135.3
65°	679.3	748.5	902.6	1022.1	1069.2
67.5°	597.5	673.0	836.5	956.0	1003.2
70°	500.0	594.4	764.2	883.7	930.9
72.5°	408.8	512.6	688.7	805.1	849.1
75°	320.8	437.1	610.1	713.9	735.9
77.5°	239.0	361.7	528.3	572.4	556.6
80°	169.8	289.3	412.0	390.0	399.4
82.5°	110.1	220.1	254.7	289.3	298.8
85°	62.9	128.9	157.2	169.8	176.1
87.5°	28.3	47.2	62.9	62.9	59.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)