

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: P391712

Luminaire Tested: **24CZ2-80VHE-HRP-UNV-L950-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: P391712
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: 24CZ2-80VHE-HRP-UNV-L950-CD1-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: 6255.6 lumens
Efficiency: N/A
Efficacy: 116.3 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

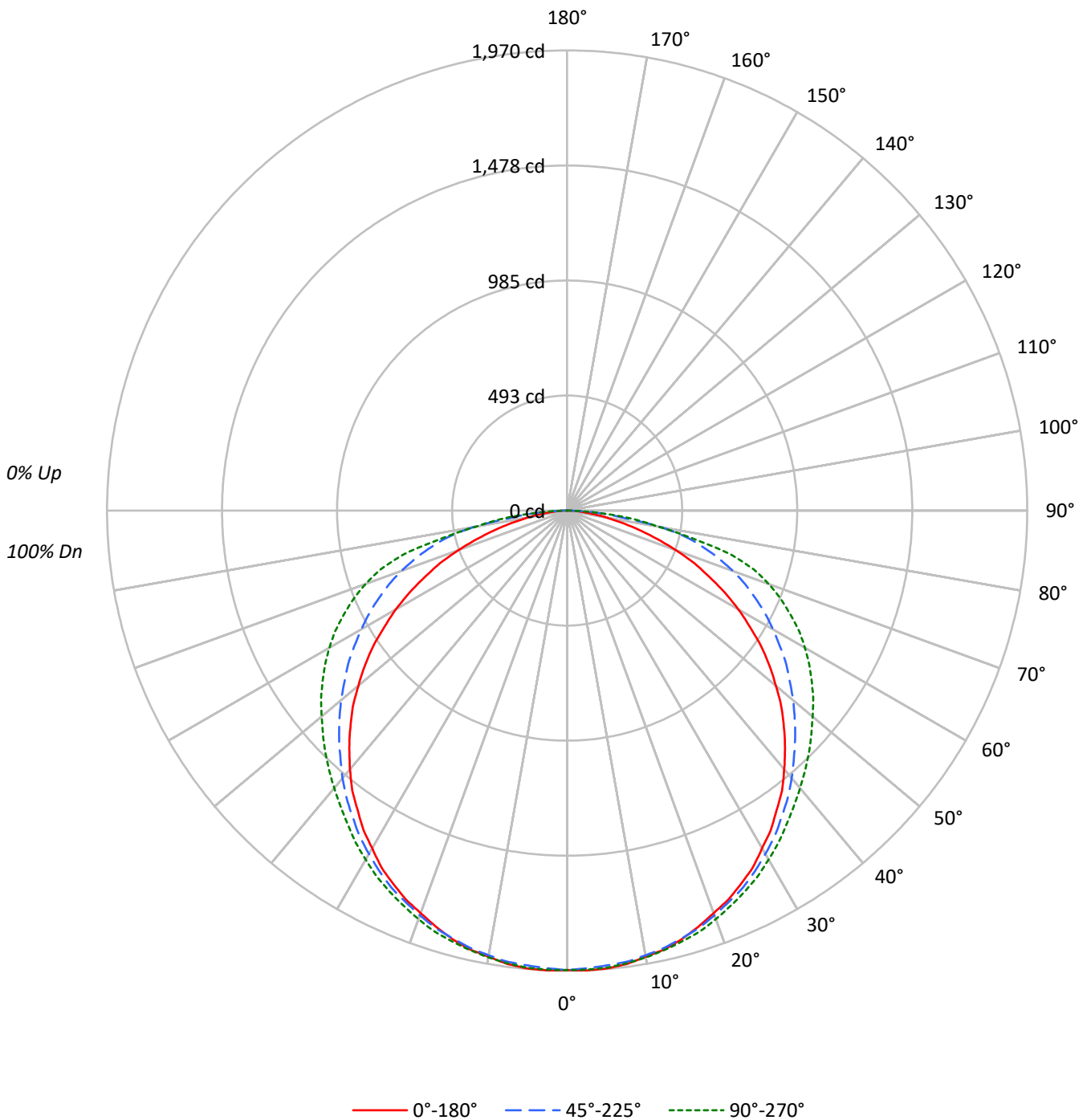
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2647	2647	2647
5°	2657	2640	2653
10°	2650	2641	2654
15°	2645	2641	2658
20°	2626	2639	2666
25°	2616	2644	2672
30°	2593	2637	2680
35°	2569	2630	2691
40°	2540	2627	2725
45°	2497	2627	2787
50°	2442	2644	2871
55°	2380	2686	2999
60°	2280	2739	3165
65°	2134	2835	3359
70°	1941	2966	3613
75°	1645	3130	3775
80°	1299	3150	3054
85°	959	2394	2683



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	186.6	3.0
10°-20°	537.1	8.6
20°-30°	821.3	13.1
30°-40°	1004.0	16.0
40°-50°	1070.1	17.1
50°-60°	1023.1	16.4
60°-70°	866.7	13.9
70°-80°	582.5	9.3
80°-90°	164.3	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°	1544.9	24.7
0°-40°	2548.9	40.7
0°-60°	4642.1	74.2
0°-90°	6255.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6255.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1967	1967	1967	1967	1967	
5°	1967	1964	1955	1964	1964	187
15°	1899	1899	1896	1911	1908	535
25°	1762	1769	1781	1797	1800	812
35°	1564	1576	1601	1632	1638	980
45°	1312	1334	1381	1440	1464	1012
55°	1015	1052	1145	1235	1278	904
65°	670	738	890	1008	1055	665
75°	316	431	602	704	726	339
85°	62	127	155	168	174	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1967.2	1967.2	1967.2	1967.2	1967.2
2.5°	1970.3	1970.3	1961.0	1967.2	1967.2
5°	1967.2	1964.1	1954.8	1964.1	1964.1
7.5°	1957.9	1954.8	1948.6	1957.9	1954.8
10°	1939.3	1939.3	1933.1	1942.4	1942.4
12.5°	1923.8	1920.7	1917.6	1930.0	1926.9
15°	1898.9	1898.9	1895.8	1911.4	1908.3
17.5°	1867.9	1871.0	1874.1	1886.5	1889.6
20°	1833.8	1840.0	1843.1	1861.7	1861.7
22.5°	1802.8	1805.9	1812.1	1830.7	1830.7
25°	1762.4	1768.6	1781.0	1796.6	1799.7
27.5°	1722.1	1725.2	1740.7	1762.4	1765.5
30°	1669.3	1678.6	1697.3	1722.1	1725.2
32.5°	1622.8	1632.1	1653.8	1678.6	1684.8
35°	1563.8	1576.2	1601.1	1632.1	1638.3
37.5°	1511.1	1520.4	1551.4	1585.6	1594.9
40°	1445.9	1464.5	1495.6	1535.9	1551.4
42.5°	1380.8	1399.4	1436.6	1489.4	1508.0
45°	1312.5	1334.2	1380.8	1439.7	1464.5
47.5°	1244.2	1269.1	1321.8	1390.1	1418.0
50°	1166.7	1197.7	1262.9	1340.4	1371.5
52.5°	1092.2	1129.4	1200.8	1287.7	1328.0
55°	1014.6	1051.9	1145.0	1234.9	1278.4
57.5°	927.8	977.4	1079.8	1182.2	1228.7
60°	847.1	893.6	1017.7	1129.4	1176.0
62.5°	760.2	822.3	955.7	1073.6	1120.1
65°	670.2	738.5	890.5	1008.4	1055.0
67.5°	589.5	664.0	825.4	943.3	989.8
70°	493.4	586.4	754.0	871.9	918.4
72.5°	403.4	505.8	679.5	794.3	837.8
75°	316.5	431.3	602.0	704.3	726.1
77.5°	235.8	356.8	521.3	564.7	549.2
80°	167.6	285.5	406.5	384.8	394.1
82.5°	108.6	217.2	251.3	285.5	294.8
85°	62.1	127.2	155.1	167.6	173.8
87.5°	27.9	46.5	62.1	62.1	59.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)