

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: P391807

Luminaire Tested: **24CZ2-90VHE-HRP-UNV-L950-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: P391807
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-L950-CD1-SWPD1-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: 6881.1 lumens
Efficiency: N/A
Efficacy: 111.3 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

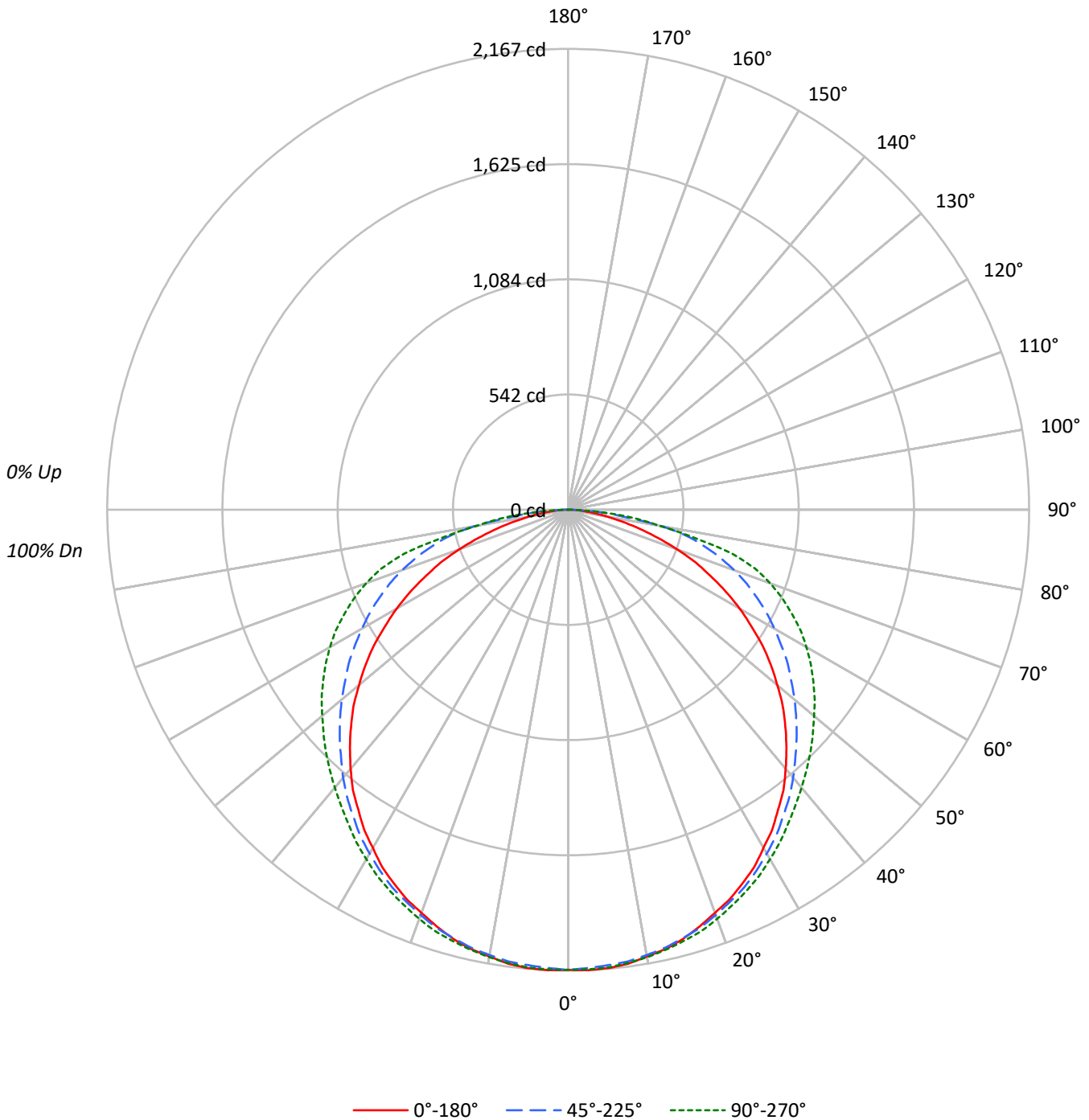
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2912	2912	2912
5°	2923	2904	2918
10°	2914	2905	2919
15°	2910	2905	2924
20°	2888	2903	2932
25°	2878	2908	2939
30°	2853	2901	2948
35°	2825	2893	2960
40°	2794	2889	2997
45°	2747	2890	3065
50°	2686	2908	3158
55°	2618	2954	3299
60°	2507	3013	3481
65°	2347	3119	3695
70°	2135	3263	3974
75°	1810	3442	4152
80°	1428	3464	3359
85°	1054	2635	2950



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	205.3	3.0
10°-20°	590.8	8.6
20°-30°	903.4	13.1
30°-40°	1104.4	16.0
40°-50°	1177.1	17.1
50°-60°	1125.4	16.4
60°-70°	953.4	13.9
70°-80°	640.7	9.3
80°-90°	180.7	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°	1699.4	24.7
0°-40°	2803.8	40.7
0°-60°	5106.3	74.2
0°-90°	6881.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6881.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2164	2164	2164	2164	2164	
5°	2164	2160	2150	2160	2160	206
15°	2089	2089	2085	2102	2099	589
25°	1939	1946	1959	1976	1980	894
35°	1720	1734	1761	1795	1802	1078
45°	1444	1468	1519	1584	1611	1114
55°	1116	1157	1259	1358	1406	994
65°	737	812	980	1109	1160	732
75°	348	474	662	775	799	373
85°	68	140	171	184	191	84
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2163.9	2163.9	2163.9	2163.9	2163.9
2.5°	2167.3	2167.3	2157.1	2163.9	2163.9
5°	2163.9	2160.5	2150.3	2160.5	2160.5
7.5°	2153.7	2150.3	2143.4	2153.7	2150.3
10°	2133.2	2133.2	2126.4	2136.6	2136.6
12.5°	2116.1	2112.7	2109.3	2123.0	2119.5
15°	2088.8	2088.8	2085.4	2102.5	2099.1
17.5°	2054.7	2058.1	2061.5	2075.2	2078.6
20°	2017.1	2024.0	2027.4	2047.9	2047.9
22.5°	1983.0	1986.4	1993.3	2013.7	2013.7
25°	1938.6	1945.5	1959.1	1976.2	1979.6
27.5°	1894.3	1897.7	1914.8	1938.6	1942.1
30°	1836.3	1846.5	1867.0	1894.3	1897.7
32.5°	1785.1	1795.3	1819.2	1846.5	1853.3
35°	1720.2	1733.9	1761.2	1795.3	1802.1
37.5°	1662.2	1672.4	1706.6	1744.1	1754.3
40°	1590.5	1611.0	1645.1	1689.5	1706.6
42.5°	1518.8	1539.3	1580.3	1638.3	1658.8
45°	1443.7	1467.6	1518.8	1583.7	1611.0
47.5°	1368.7	1396.0	1454.0	1529.1	1559.8
50°	1283.3	1317.5	1389.1	1474.5	1508.6
52.5°	1201.4	1242.4	1320.9	1416.4	1460.8
55°	1116.1	1157.0	1259.4	1358.4	1406.2
57.5°	1020.5	1075.1	1187.8	1300.4	1351.6
60°	931.8	983.0	1119.5	1242.4	1293.6
62.5°	836.2	904.5	1051.2	1180.9	1232.1
65°	737.2	812.3	979.6	1109.3	1160.5
67.5°	648.5	730.4	907.9	1037.6	1088.8
70°	542.7	645.1	829.4	959.1	1010.3
72.5°	443.7	556.3	747.5	873.8	921.5
75°	348.1	474.4	662.1	774.8	798.7
77.5°	259.4	392.5	573.4	621.2	604.1
80°	184.3	314.0	447.1	423.2	433.5
82.5°	119.5	238.9	276.5	314.0	324.2
85°	68.3	139.9	170.7	184.3	191.1
87.5°	30.7	51.2	68.3	68.3	64.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)