

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: P391808

Luminaire Tested: **24CZ2-90VHE-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: P391808
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-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: 6967.5 lumens
Efficiency: N/A
Efficacy: 112.7 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

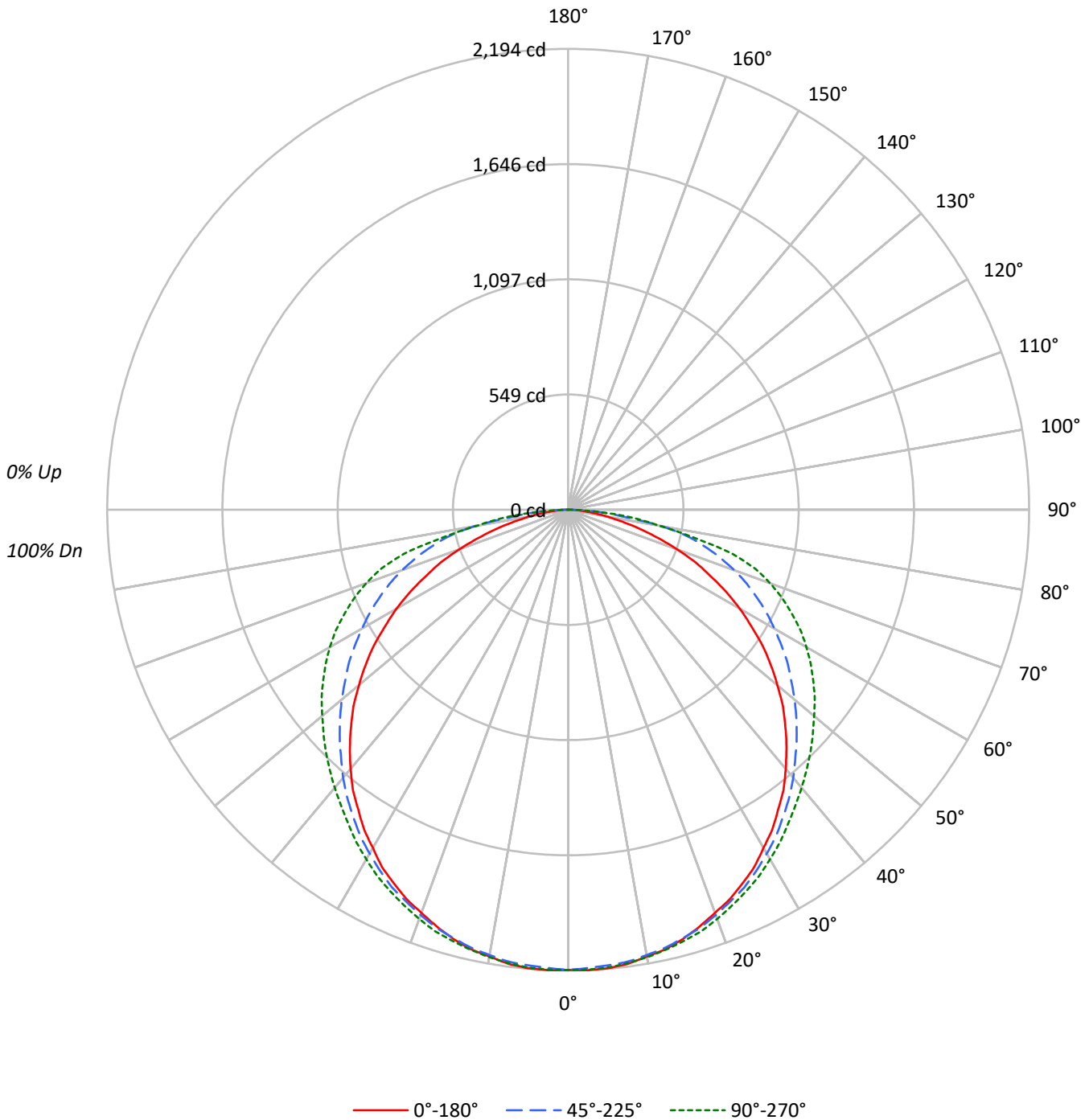
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2948	2948	2948
5°	2959	2941	2955
10°	2951	2942	2956
15°	2946	2941	2961
20°	2925	2939	2969
25°	2914	2945	2976
30°	2889	2937	2985
35°	2861	2929	2997
40°	2829	2926	3035
45°	2782	2926	3104
50°	2720	2944	3197
55°	2651	2991	3340
60°	2539	3050	3525
65°	2377	3158	3741
70°	2162	3304	4024
75°	1832	3486	4204
80°	1446	3508	3401
85°	1067	2668	2987



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.8	3.0
10°-20°	598.2	8.6
20°-30°	914.7	13.1
30°-40°	1118.2	16.0
40°-50°	1191.8	17.1
50°-60°	1139.5	16.4
60°-70°	965.3	13.9
70°-80°	648.8	9.3
80°-90°	183.0	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°	1720.8	24.7
0°-40°	2839.0	40.7
0°-60°	5170.4	74.2
0°-90°	6967.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6967.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2191	2191	2191	2191	2191	
5°	2191	2188	2177	2188	2188	208
15°	2115	2115	2112	2129	2125	596
25°	1963	1970	1984	2001	2004	905
35°	1742	1756	1783	1818	1825	1091
45°	1462	1486	1538	1604	1631	1128
55°	1130	1172	1275	1376	1424	1007
65°	746	822	992	1123	1175	741
75°	352	480	670	784	809	377
85°	69	142	173	187	194	86
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2191.1	2191.1	2191.1	2191.1	2191.1
2.5°	2194.5	2194.5	2184.2	2191.1	2191.1
5°	2191.1	2187.6	2177.3	2187.6	2187.6
7.5°	2180.7	2177.3	2170.3	2180.7	2177.3
10°	2160.0	2160.0	2153.1	2163.4	2163.4
12.5°	2142.7	2139.2	2135.8	2149.6	2146.2
15°	2115.0	2115.0	2111.6	2128.9	2125.4
17.5°	2080.5	2083.9	2087.4	2101.2	2104.7
20°	2042.5	2049.4	2052.8	2073.6	2073.6
22.5°	2007.9	2011.4	2018.3	2039.0	2039.0
25°	1963.0	1969.9	1983.7	2001.0	2004.5
27.5°	1918.1	1921.5	1938.8	1963.0	1966.4
30°	1859.3	1869.7	1890.4	1918.1	1921.5
32.5°	1807.5	1817.8	1842.0	1869.7	1876.6
35°	1741.8	1755.6	1783.3	1817.8	1824.7
37.5°	1683.1	1693.4	1728.0	1766.0	1776.4
40°	1610.5	1631.2	1665.8	1710.7	1728.0
42.5°	1537.9	1558.6	1600.1	1658.9	1679.6
45°	1461.9	1486.1	1537.9	1603.6	1631.2
47.5°	1385.8	1413.5	1472.2	1548.3	1579.4
50°	1299.4	1334.0	1406.6	1493.0	1527.5
52.5°	1216.5	1258.0	1337.5	1434.2	1479.2
55°	1130.1	1171.6	1275.2	1375.5	1423.9
57.5°	1033.3	1088.6	1202.7	1316.7	1368.6
60°	943.5	995.3	1133.6	1258.0	1309.8
62.5°	846.7	915.8	1064.4	1195.8	1247.6
65°	746.5	822.5	991.9	1123.2	1175.0
67.5°	656.6	739.6	919.3	1050.6	1102.5
70°	549.5	653.2	839.8	971.1	1023.0
72.5°	449.3	563.3	756.9	884.7	933.1
75°	352.5	480.4	670.5	784.5	808.7
77.5°	262.7	397.4	580.6	629.0	611.7
80°	186.6	317.9	452.7	428.5	438.9
82.5°	121.0	241.9	279.9	317.9	328.3
85°	69.1	141.7	172.8	186.6	193.5
87.5°	31.1	51.8	69.1	69.1	65.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)