

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: P391660

Luminaire Tested: **24CZ2-75VHE-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: P391660
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: 24CZ2-75VHE-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: 5486.7 lumens
Efficiency: N/A
Efficacy: 110.0 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

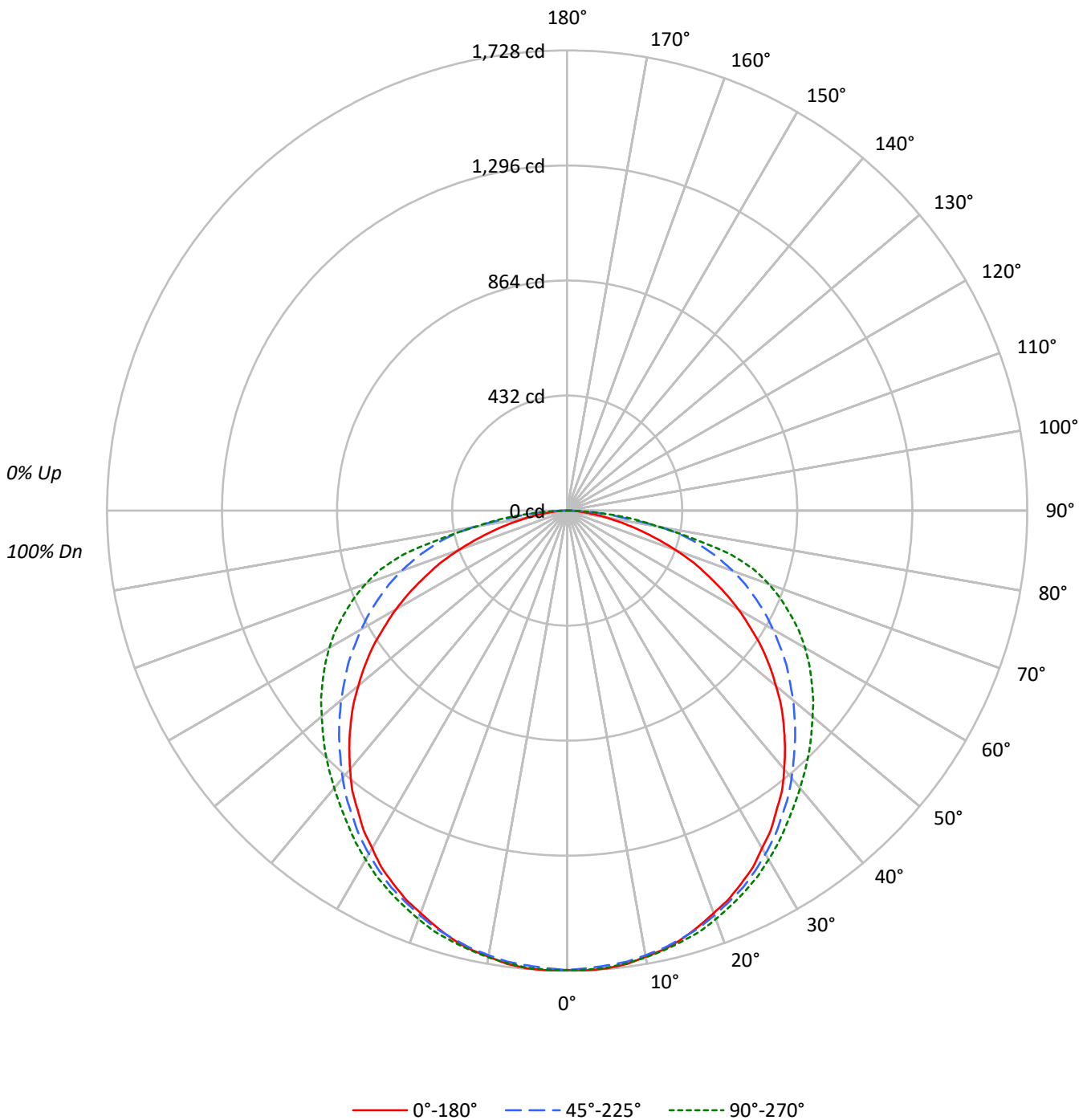
Input Watts (W): 49.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2322	2322	2322
5°	2330	2316	2327
10°	2324	2316	2328
15°	2320	2316	2331
20°	2303	2315	2338
25°	2295	2319	2343
30°	2275	2313	2351
35°	2253	2307	2360
40°	2227	2304	2390
45°	2191	2304	2444
50°	2142	2318	2518
55°	2088	2356	2630
60°	1999	2402	2775
65°	1871	2487	2946
70°	1702	2602	3169
75°	1443	2745	3310
80°	1139	2762	2678
85°	840	2101	2353



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.7	3.0
10°-20°	471.0	8.6
20°-30°	720.3	13.1
30°-40°	880.6	16.0
40°-50°	938.5	17.1
50°-60°	897.4	16.4
60°-70°	760.2	13.9
70°-80°	510.9	9.3
80°-90°	144.1	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°	1355.0	24.7
0°-40°	2235.6	40.7
0°-60°	4071.5	74.2
0°-90°	5486.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5486.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1725	1725	1725	1725	1725	
5°	1725	1723	1714	1723	1723	164
15°	1666	1666	1663	1676	1674	470
25°	1546	1551	1562	1576	1578	712
35°	1372	1382	1404	1432	1437	859
45°	1151	1170	1211	1263	1284	888
55°	890	923	1004	1083	1121	793
65°	588	648	781	884	925	584
75°	278	378	528	618	637	297
85°	54	112	136	147	152	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1725.4	1725.4	1725.4	1725.4	1725.4
2.5°	1728.1	1728.1	1720.0	1725.4	1725.4
5°	1725.4	1722.7	1714.5	1722.7	1722.7
7.5°	1717.2	1714.5	1709.1	1717.2	1714.5
10°	1700.9	1700.9	1695.5	1703.6	1703.6
12.5°	1687.3	1684.6	1681.9	1692.8	1690.0
15°	1665.5	1665.5	1662.8	1676.4	1673.7
17.5°	1638.3	1641.0	1643.8	1654.7	1657.4
20°	1608.4	1613.8	1616.6	1632.9	1632.9
22.5°	1581.2	1583.9	1589.3	1605.7	1605.7
25°	1545.8	1551.2	1562.1	1575.7	1578.5
27.5°	1510.4	1513.1	1526.7	1545.8	1548.5
30°	1464.1	1472.3	1488.6	1510.4	1513.1
32.5°	1423.3	1431.5	1450.5	1472.3	1477.8
35°	1371.6	1382.5	1404.3	1431.5	1436.9
37.5°	1325.4	1333.5	1360.7	1390.7	1398.8
40°	1268.2	1284.5	1311.7	1347.1	1360.7
42.5°	1211.1	1227.4	1260.0	1306.3	1322.6
45°	1151.2	1170.2	1211.1	1262.8	1284.5
47.5°	1091.3	1113.1	1159.3	1219.2	1243.7
50°	1023.3	1050.5	1107.6	1175.7	1202.9
52.5°	958.0	990.6	1053.2	1129.4	1164.8
55°	889.9	922.6	1004.2	1083.1	1121.2
57.5°	813.7	857.3	947.1	1036.9	1077.7
60°	743.0	783.8	892.6	990.6	1031.4
62.5°	666.8	721.2	838.2	941.6	982.4
65°	587.8	647.7	781.1	884.5	925.3
67.5°	517.1	582.4	723.9	827.3	868.1
70°	432.7	514.4	661.3	764.7	805.6
72.5°	353.8	443.6	596.0	696.7	734.8
75°	277.6	378.3	528.0	617.8	636.8
77.5°	206.8	313.0	457.2	495.3	481.7
80°	147.0	250.4	356.5	337.5	345.6
82.5°	95.3	190.5	220.4	250.4	258.5
85°	54.4	111.6	136.1	147.0	152.4
87.5°	24.5	40.8	54.4	54.4	51.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)