

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: P391829

Luminaire Tested: **24CZ2-90VHE-RDP-UNV-L940-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: P391829
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-RDP-UNV-L940-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RDP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5201.2 lumens
Efficiency: N/A
Efficacy: 84.2 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

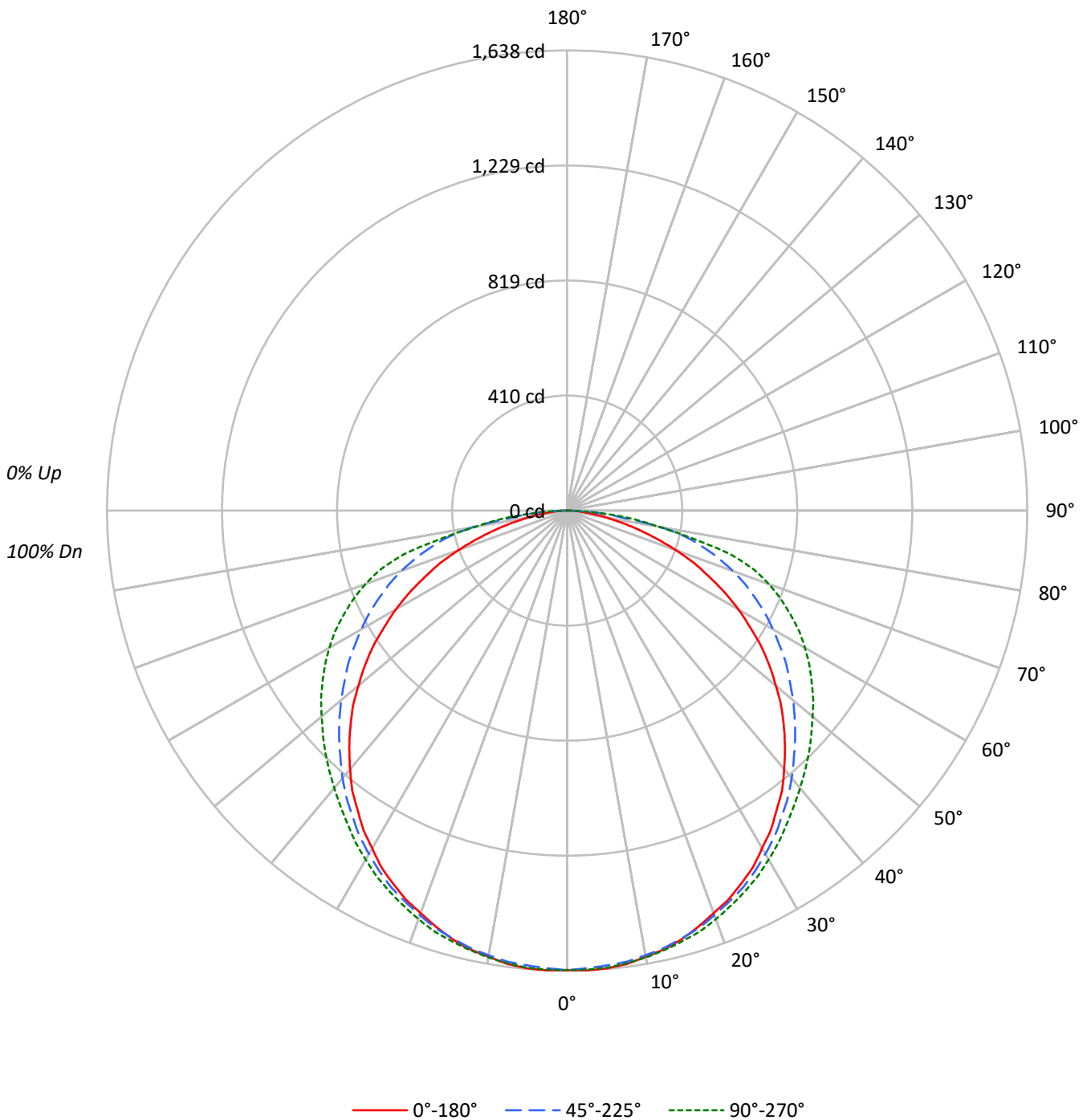
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2201	2201	2201
5°	2209	2195	2206
10°	2203	2196	2206
15°	2199	2196	2210
20°	2183	2194	2216
25°	2176	2198	2221
30°	2156	2192	2229
35°	2136	2187	2237
40°	2112	2184	2266
45°	2077	2184	2317
50°	2030	2198	2387
55°	1979	2233	2493
60°	1895	2277	2631
65°	1774	2357	2793
70°	1614	2466	3004
75°	1368	2602	3138
80°	1079	2619	2538
85°	797	1991	2231



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.2	3.0
10°-20°	446.5	8.6
20°-30°	682.8	13.1
30°-40°	834.8	16.0
40°-50°	889.7	17.1
50°-60°	850.7	16.4
60°-70°	720.6	13.9
70°-80°	484.3	9.3
80°-90°	136.6	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°	1284.5	24.7
0°-40°	2119.3	40.7
0°-60°	3859.7	74.2
0°-90°	5201.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5201.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1636	1636	1636	1636	1636	
5°	1636	1633	1625	1633	1633	155
15°	1579	1579	1576	1589	1587	445
25°	1465	1470	1481	1494	1496	675
35°	1300	1311	1331	1357	1362	815
45°	1091	1109	1148	1197	1218	842
55°	844	875	952	1027	1063	751
65°	557	614	740	838	877	553
75°	263	359	500	586	604	282
85°	52	106	129	139	144	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1635.6	1635.6	1635.6	1635.6	1635.6
2.5°	1638.2	1638.2	1630.5	1635.6	1635.6
5°	1635.6	1633.0	1625.3	1633.0	1633.0
7.5°	1627.9	1625.3	1620.1	1627.9	1625.3
10°	1612.4	1612.4	1607.3	1615.0	1615.0
12.5°	1599.5	1596.9	1594.4	1604.7	1602.1
15°	1578.9	1578.9	1576.3	1589.2	1586.6
17.5°	1553.1	1555.7	1558.2	1568.6	1571.1
20°	1524.7	1529.9	1532.4	1547.9	1547.9
22.5°	1498.9	1501.5	1506.6	1522.1	1522.1
25°	1465.4	1470.5	1480.8	1493.7	1496.3
27.5°	1431.8	1434.4	1447.3	1465.4	1467.9
30°	1388.0	1395.7	1411.2	1431.8	1434.4
32.5°	1349.3	1357.0	1375.1	1395.7	1400.9
35°	1300.2	1310.6	1331.2	1357.0	1362.2
37.5°	1256.4	1264.1	1289.9	1318.3	1326.0
40°	1202.2	1217.7	1243.5	1277.0	1289.9
42.5°	1148.0	1163.5	1194.5	1238.3	1253.8
45°	1091.3	1109.3	1148.0	1197.1	1217.7
47.5°	1034.5	1055.2	1099.0	1155.8	1179.0
50°	970.0	995.8	1050.0	1114.5	1140.3
52.5°	908.1	939.1	998.4	1070.6	1104.2
55°	843.6	874.6	952.0	1026.8	1062.9
57.5°	771.4	812.7	897.8	982.9	1021.6
60°	704.3	743.0	846.2	939.1	977.8
62.5°	632.1	683.7	794.6	892.6	931.3
65°	557.2	614.0	740.4	838.5	877.2
67.5°	490.2	552.1	686.2	784.3	823.0
70°	410.2	487.6	626.9	724.9	763.6
72.5°	335.4	420.5	565.0	660.4	696.6
75°	263.1	358.6	500.5	585.6	603.7
77.5°	196.1	296.7	433.4	469.5	456.6
80°	139.3	237.3	338.0	319.9	327.6
82.5°	90.3	180.6	209.0	237.3	245.1
85°	51.6	105.8	129.0	139.3	144.5
87.5°	23.2	38.7	51.6	51.6	49.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)