

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: P391565

Luminaire Tested: **24CZ2-65VHE-HRP-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: P391565
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: 24CZ2-65VHE-HRP-UNV-L940-CD1-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: 4760.2 lumens
Efficiency: N/A
Efficacy: 112.8 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

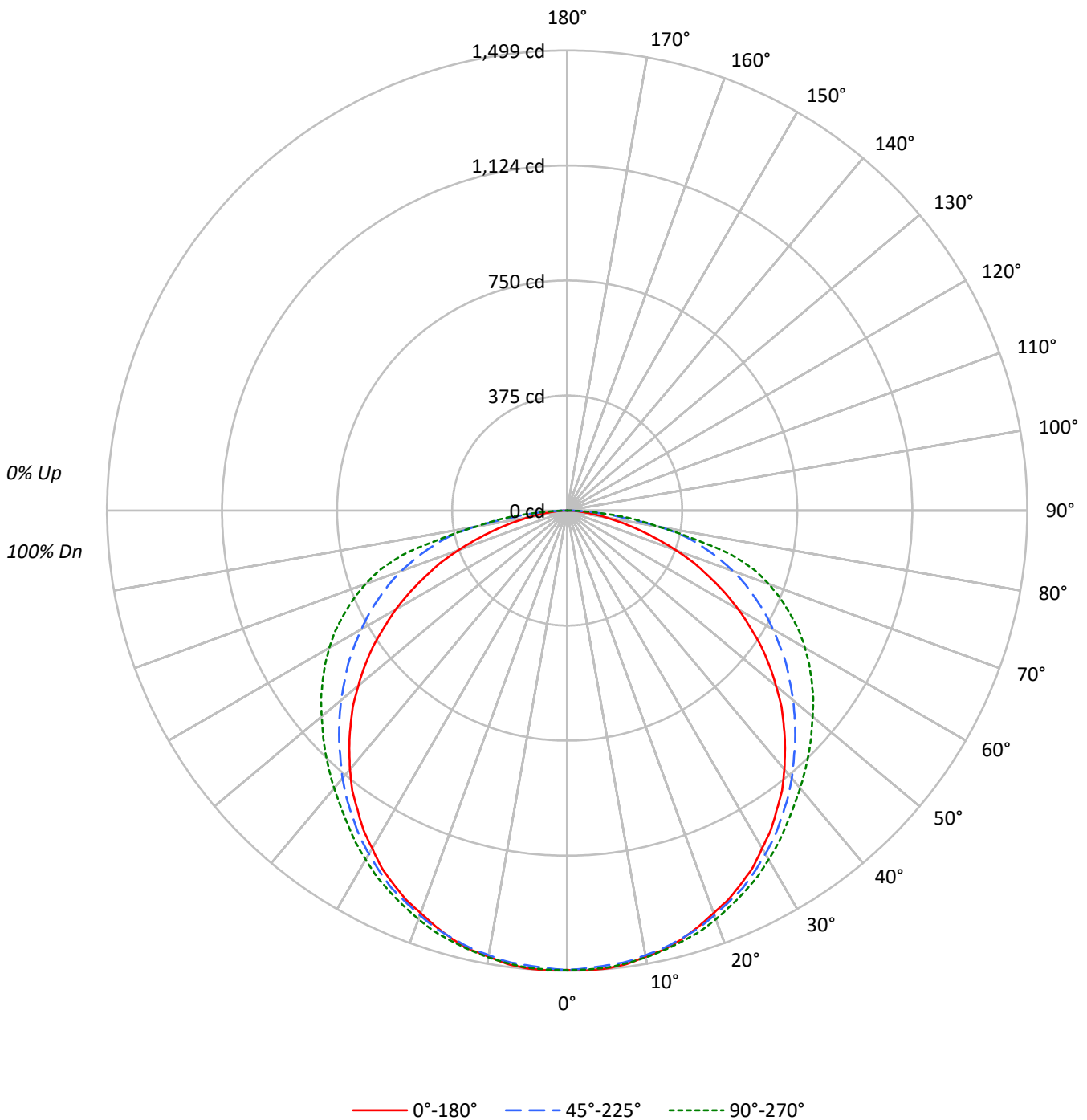
Input Watts (W): 42.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2014	2014	2014
5°	2022	2009	2019
10°	2016	2010	2019
15°	2013	2009	2023
20°	1998	2008	2028
25°	1991	2012	2033
30°	1974	2007	2040
35°	1955	2001	2048
40°	1933	1999	2074
45°	1901	1999	2120
50°	1858	2012	2184
55°	1811	2044	2282
60°	1735	2084	2408
65°	1624	2157	2556
70°	1477	2257	2749
75°	1252	2381	2872
80°	988	2397	2324
85°	729	1823	2041



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.0	3.0
10°-20°	408.7	8.6
20°-30°	625.0	13.1
30°-40°	764.0	16.0
40°-50°	814.3	17.1
50°-60°	778.5	16.4
60°-70°	659.5	13.9
70°-80°	443.3	9.3
80°-90°	125.0	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°	1175.6	24.7
0°-40°	1939.6	40.7
0°-60°	3532.4	74.2
0°-90°	4760.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4760.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1497	1497	1497	1497	1497	
5°	1497	1495	1488	1495	1495	142
15°	1445	1445	1443	1454	1452	407
25°	1341	1346	1355	1367	1369	618
35°	1190	1199	1218	1242	1247	745
45°	999	1015	1051	1096	1114	770
55°	772	800	871	940	973	688
65°	510	562	678	767	803	506
75°	241	328	458	536	552	258
85°	47	97	118	128	132	58
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1496.9	1496.9	1496.9	1496.9	1496.9
2.5°	1499.3	1499.3	1492.2	1496.9	1496.9
5°	1496.9	1494.6	1487.5	1494.6	1494.6
7.5°	1489.9	1487.5	1482.8	1489.9	1487.5
10°	1475.7	1475.7	1471.0	1478.1	1478.1
12.5°	1463.9	1461.5	1459.2	1468.6	1466.3
15°	1445.0	1445.0	1442.6	1454.4	1452.1
17.5°	1421.4	1423.8	1426.1	1435.6	1437.9
20°	1395.4	1400.1	1402.5	1416.7	1416.7
22.5°	1371.8	1374.2	1378.9	1393.1	1393.1
25°	1341.1	1345.8	1355.3	1367.1	1369.4
27.5°	1310.4	1312.8	1324.6	1341.1	1343.5
30°	1270.3	1277.4	1291.5	1310.4	1312.8
32.5°	1234.9	1241.9	1258.5	1277.4	1282.1
35°	1190.0	1199.4	1218.3	1241.9	1246.7
37.5°	1149.9	1156.9	1180.6	1206.5	1213.6
40°	1100.3	1114.4	1138.1	1168.8	1180.6
42.5°	1050.7	1064.9	1093.2	1133.3	1147.5
45°	998.8	1015.3	1050.7	1095.6	1114.4
47.5°	946.8	965.7	1005.8	1057.8	1079.0
50°	887.8	911.4	961.0	1020.0	1043.6
52.5°	831.1	859.4	913.8	979.9	1010.6
55°	772.1	800.4	871.3	939.7	972.8
57.5°	706.0	743.8	821.7	899.6	935.0
60°	644.6	680.0	774.4	859.4	894.9
62.5°	578.5	625.7	727.2	816.9	852.4
65°	510.0	561.9	677.6	767.4	802.8
67.5°	448.6	505.3	628.1	717.8	753.2
70°	375.4	446.3	573.8	663.5	698.9
72.5°	306.9	384.9	517.1	604.4	637.5
75°	240.8	328.2	458.1	536.0	552.5
77.5°	179.4	271.5	396.7	429.7	417.9
80°	127.5	217.2	309.3	292.8	299.9
82.5°	82.6	165.3	191.3	217.2	224.3
85°	47.2	96.8	118.1	127.5	132.2
87.5°	21.3	35.4	47.2	47.2	44.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)