

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: P391701

Luminaire Tested: **24CZ2-80VHE-HRP-UNV-L930-CD1-SDWPD1-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: P391701
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: 24CZ2-80VHE-HRP-UNV-L930-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5554.0 lumens
Efficiency: N/A
Efficacy: 103.2 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

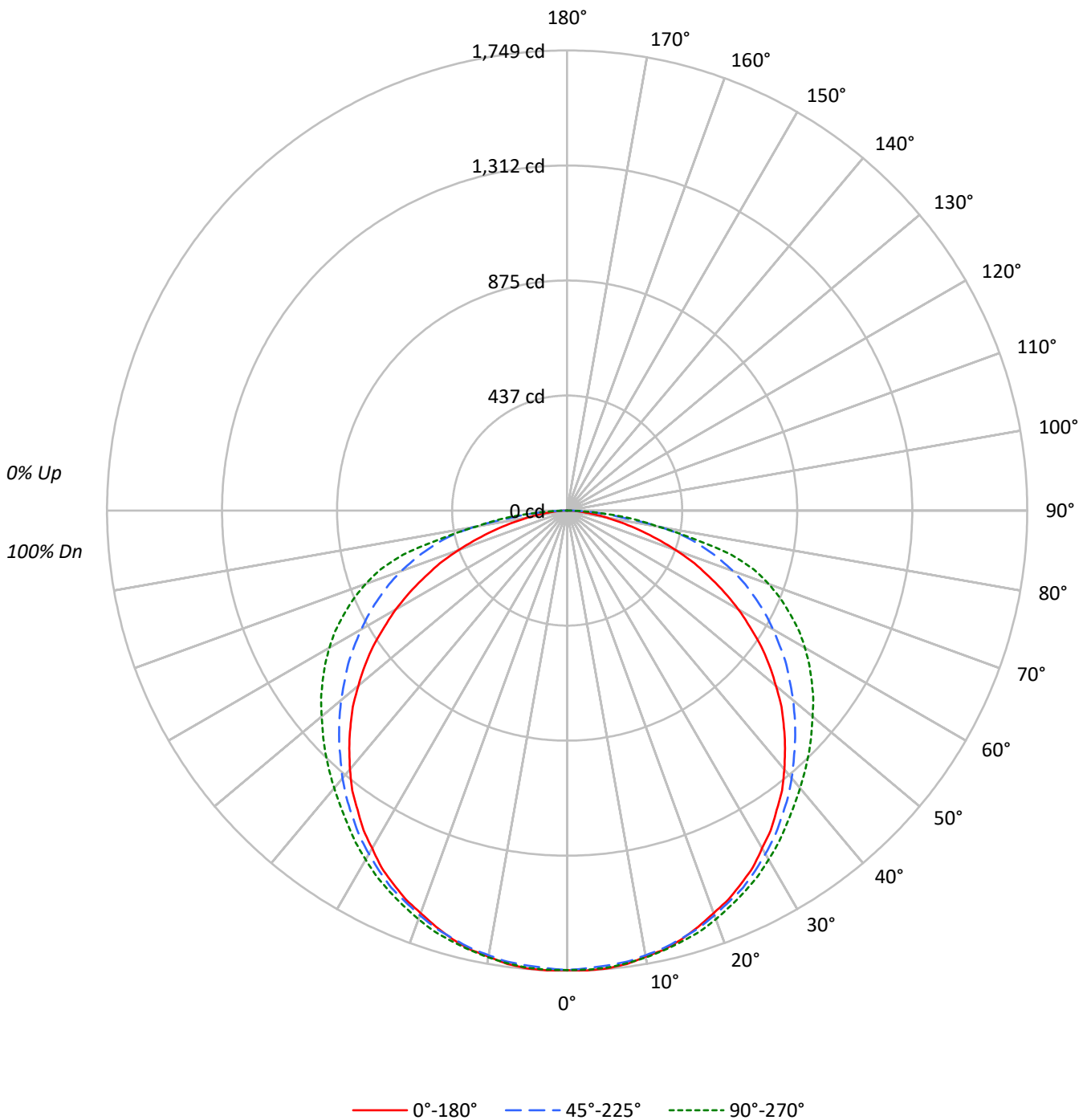
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82					82			
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67					67			
3	88	77	68	62	86	76	68	61	72	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47					47			
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40					40			
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35					35			
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27					27			
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24					24			
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22					22			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2350	2350	2350
5°	2359	2344	2355
10°	2352	2345	2356
15°	2349	2345	2360
20°	2331	2343	2367
25°	2323	2348	2372
30°	2303	2341	2380
35°	2281	2335	2389
40°	2255	2332	2419
45°	2217	2333	2474
50°	2168	2347	2549
55°	2113	2384	2662
60°	2024	2432	2810
65°	1894	2517	2982
70°	1723	2633	3208
75°	1461	2778	3351
80°	1153	2796	2711
85°	851	2126	2382



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.7	3.0
10°-20°	476.8	8.6
20°-30°	729.2	13.1
30°-40°	891.4	16.0
40°-50°	950.0	17.1
50°-60°	908.4	16.4
60°-70°	769.5	13.9
70°-80°	517.2	9.3
80°-90°	145.9	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°	1371.7	24.7
0°-40°	2263.1	40.7
0°-60°	4121.5	74.2
0°-90°	5554.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5554.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1747	1747	1747	1747	1747	
5°	1747	1744	1736	1744	1744	166
15°	1686	1686	1683	1697	1694	475
25°	1565	1570	1581	1595	1598	721
35°	1388	1400	1422	1449	1455	870
45°	1165	1185	1226	1278	1300	899
55°	901	934	1016	1096	1135	802
65°	595	656	791	895	937	591
75°	281	383	534	625	645	301
85°	55	113	138	149	154	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1746.6	1746.6	1746.6	1746.6	1746.6
2.5°	1749.3	1749.3	1741.1	1746.6	1746.6
5°	1746.6	1743.8	1735.6	1743.8	1743.8
7.5°	1738.3	1735.6	1730.0	1738.3	1735.6
10°	1721.8	1721.8	1716.3	1724.5	1724.5
12.5°	1708.0	1705.3	1702.5	1713.5	1710.8
15°	1686.0	1686.0	1683.2	1697.0	1694.2
17.5°	1658.4	1661.2	1663.9	1674.9	1677.7
20°	1628.1	1633.6	1636.4	1652.9	1652.9
22.5°	1600.6	1603.3	1608.8	1625.4	1625.4
25°	1564.8	1570.3	1581.3	1595.1	1597.8
27.5°	1528.9	1531.7	1545.5	1564.8	1567.5
30°	1482.1	1490.4	1506.9	1528.9	1531.7
32.5°	1440.8	1449.1	1468.3	1490.4	1495.9
35°	1388.4	1399.5	1421.5	1449.1	1454.6
37.5°	1341.6	1349.9	1377.4	1407.7	1416.0
40°	1283.8	1300.3	1327.8	1363.7	1377.4
42.5°	1225.9	1242.4	1275.5	1322.3	1338.9
45°	1165.3	1184.6	1225.9	1278.3	1300.3
47.5°	1104.7	1126.7	1173.6	1234.2	1259.0
50°	1035.8	1063.4	1121.2	1190.1	1217.6
52.5°	969.7	1002.8	1066.1	1143.3	1179.1
55°	900.8	933.9	1016.5	1096.4	1135.0
57.5°	823.7	867.8	958.7	1049.6	1090.9
60°	752.1	793.4	903.6	1002.8	1044.1
62.5°	674.9	730.0	848.5	953.2	994.5
65°	595.0	655.7	790.6	895.3	936.6
67.5°	523.4	589.5	732.8	837.5	878.8
70°	438.0	520.7	669.4	774.1	815.4
72.5°	358.1	449.0	603.3	705.2	743.8
75°	281.0	382.9	534.4	625.4	644.6
77.5°	209.4	316.8	462.8	501.4	487.6
80°	148.8	253.4	360.9	341.6	349.9
82.5°	96.4	192.8	223.1	253.4	261.7
85°	55.1	112.9	137.7	148.8	154.3
87.5°	24.8	41.3	55.1	55.1	52.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)