

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: P391605

Luminaire Tested: **24CZ2-70VHE-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: P391605
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: 24CZ2-70VHE-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: 4823.5 lumens
Efficiency: N/A
Efficacy: 105.5 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

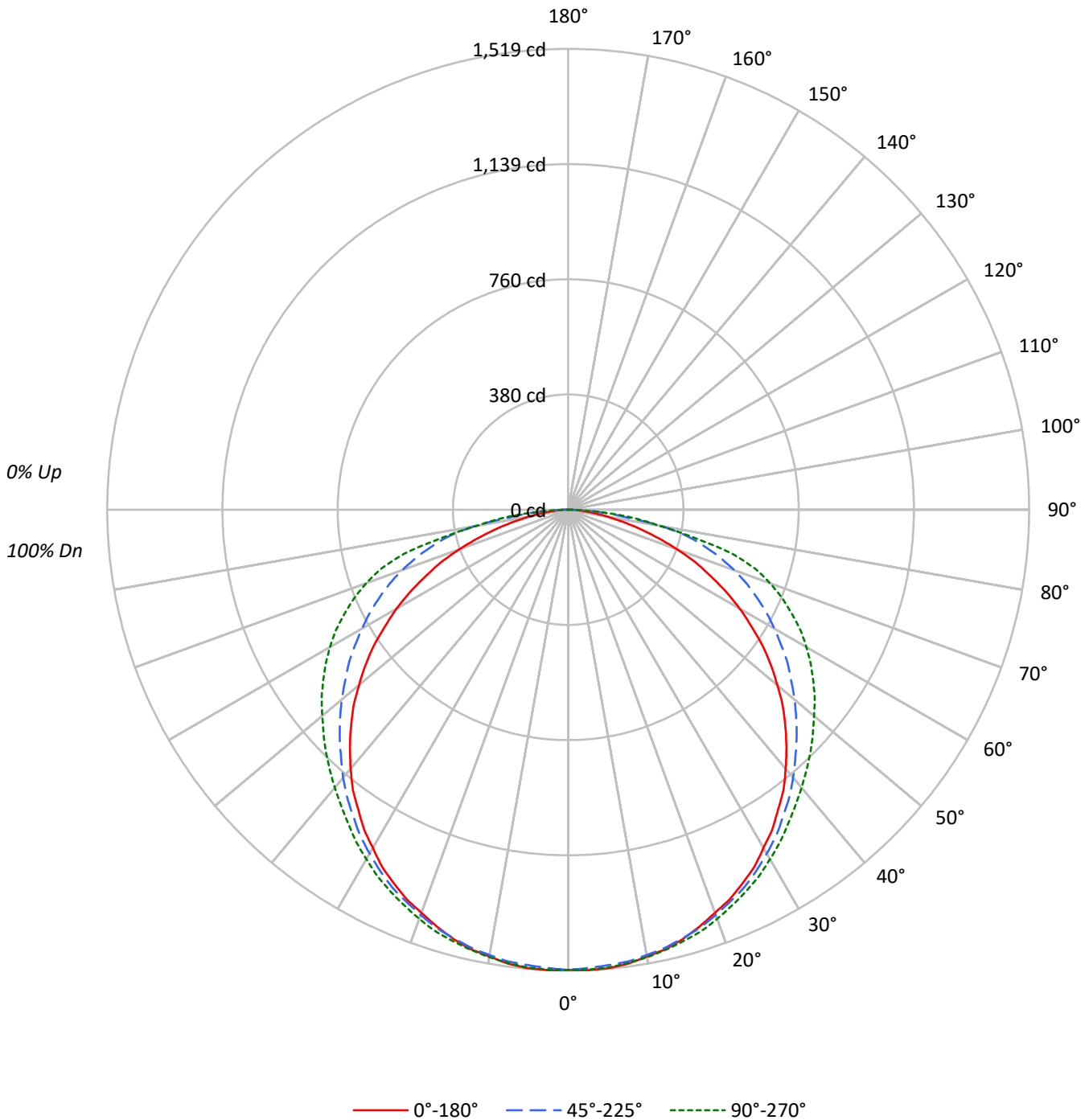
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2041	2041	2041
5°	2049	2036	2046
10°	2043	2036	2046
15°	2040	2036	2050
20°	2025	2035	2055
25°	2017	2039	2060
30°	2000	2033	2067
35°	1981	2028	2075
40°	1958	2025	2101
45°	1926	2026	2149
50°	1883	2038	2214
55°	1835	2071	2312
60°	1758	2112	2440
65°	1645	2186	2590
70°	1496	2287	2786
75°	1268	2413	2910
80°	1001	2428	2354
85°	739	1846	2069



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	143.9	3.0
10°-20°	414.1	8.6
20°-30°	633.3	13.1
30°-40°	774.1	16.0
40°-50°	825.1	17.1
50°-60°	788.9	16.4
60°-70°	668.3	13.9
70°-80°	449.1	9.3
80°-90°	126.7	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°	1191.2	24.7
0°-40°	1965.4	40.7
0°-60°	3579.4	74.2
0°-90°	4823.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4823.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1517	1517	1517	1517	1517	
5°	1517	1514	1507	1514	1514	144
15°	1464	1464	1462	1474	1471	413
25°	1359	1364	1373	1385	1388	626
35°	1206	1215	1234	1258	1263	755
45°	1012	1029	1065	1110	1129	781
55°	782	811	883	952	986	697
65°	517	569	687	778	814	513
75°	244	333	464	543	560	261
85°	48	98	120	129	134	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1516.9	1516.9	1516.9	1516.9	1516.9
2.5°	1519.2	1519.2	1512.1	1516.9	1516.9
5°	1516.9	1514.5	1507.3	1514.5	1514.5
7.5°	1509.7	1507.3	1502.5	1509.7	1507.3
10°	1495.3	1495.3	1490.5	1497.7	1497.7
12.5°	1483.4	1481.0	1478.6	1488.1	1485.8
15°	1464.2	1464.2	1461.8	1473.8	1471.4
17.5°	1440.3	1442.7	1445.1	1454.6	1457.0
20°	1414.0	1418.8	1421.2	1435.5	1435.5
22.5°	1390.0	1392.4	1397.2	1411.6	1411.6
25°	1358.9	1363.7	1373.3	1385.3	1387.7
27.5°	1327.8	1330.2	1342.2	1358.9	1361.3
30°	1287.2	1294.3	1308.7	1327.8	1330.2
32.5°	1251.3	1258.5	1275.2	1294.3	1299.1
35°	1205.8	1215.4	1234.5	1258.5	1263.2
37.5°	1165.2	1172.3	1196.3	1222.6	1229.8
40°	1114.9	1129.3	1153.2	1184.3	1196.3
42.5°	1064.7	1079.0	1107.7	1148.4	1162.8
45°	1012.0	1028.8	1064.7	1110.1	1129.3
47.5°	959.4	978.5	1019.2	1071.8	1093.4
50°	899.6	923.5	973.8	1033.6	1057.5
52.5°	842.2	870.9	925.9	992.9	1024.0
55°	782.4	811.1	882.8	952.2	985.7
57.5°	715.4	753.6	832.6	911.5	947.4
60°	653.2	689.0	784.7	870.9	906.8
62.5°	586.2	634.0	736.9	827.8	863.7
65°	516.8	569.4	686.7	777.6	813.5
67.5°	454.6	512.0	636.4	727.3	763.2
70°	380.4	452.2	581.4	672.3	708.2
72.5°	311.0	390.0	524.0	612.5	646.0
75°	244.0	332.6	464.1	543.1	559.8
77.5°	181.8	275.1	401.9	435.4	423.5
80°	129.2	220.1	313.4	296.7	303.8
82.5°	83.7	167.5	193.8	220.1	227.3
85°	47.9	98.1	119.6	129.2	134.0
87.5°	21.5	35.9	47.9	47.9	45.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)