

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: P388823

Luminaire Tested: **24CZ2-45VHE-UNV-L930-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: P388823
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45VHE-UNV-L930-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

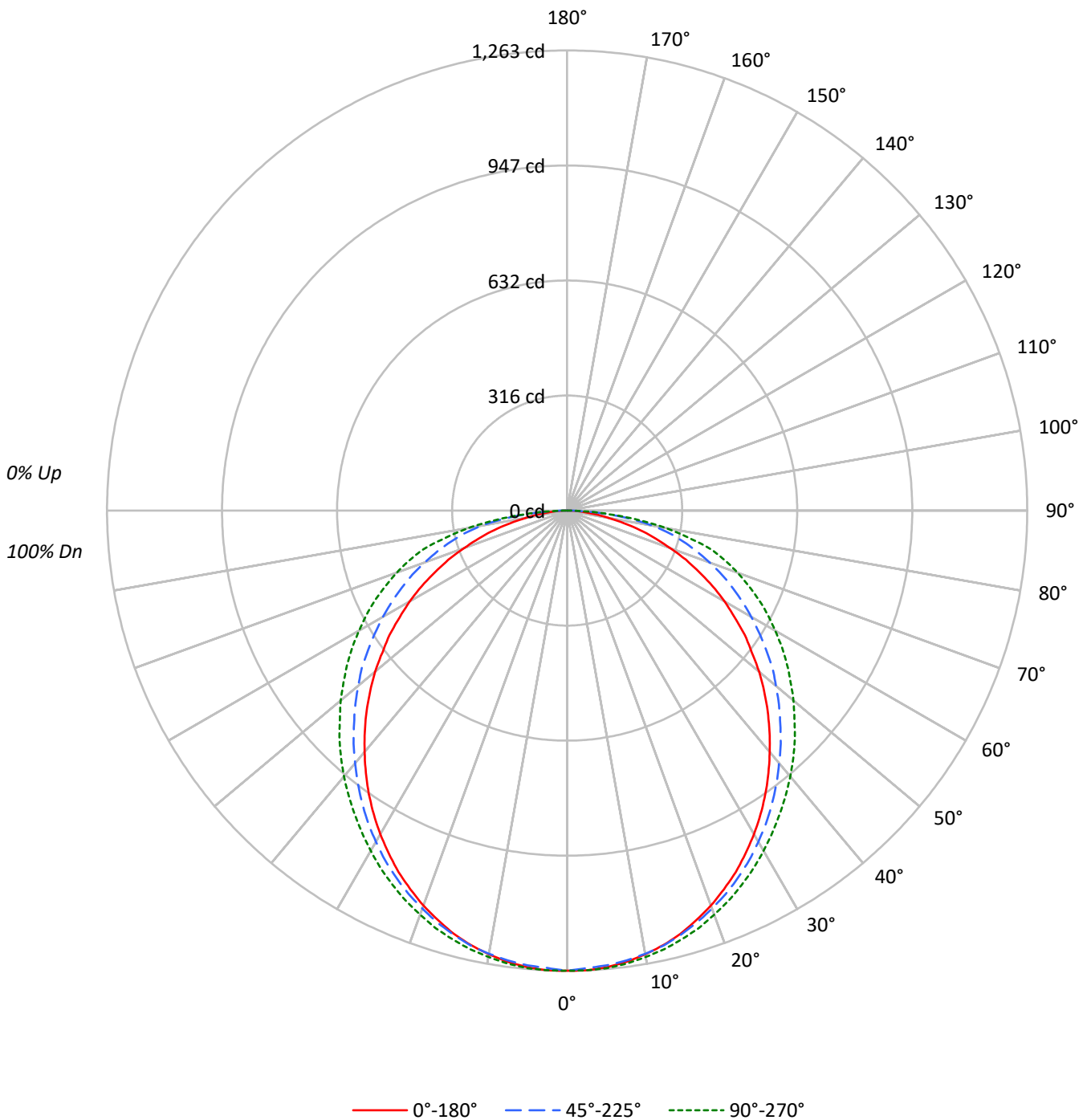
Lumens per Lamp: N/A
Luminaire Lumens: 3761.5 lumens
Efficiency: N/A
Efficacy: 127.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 29.6
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	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1699	1699	1699
5°	1699	1692	1702
10°	1689	1688	1700
15°	1675	1679	1696
20°	1652	1665	1690
25°	1625	1649	1683
30°	1593	1631	1675
35°	1559	1611	1670
40°	1519	1590	1674
45°	1481	1574	1682
50°	1440	1566	1698
55°	1396	1564	1729
60°	1341	1571	1774
65°	1271	1595	1850
70°	1180	1635	1956
75°	1077	1717	2121
80°	885	1848	2121
85°	678	1706	1822



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	119.4	3.2
10°-20°	341.0	9.1
20°-30°	513.1	13.6
30°-40°	614.9	16.3
40°-50°	640.8	17.0
50°-60°	596.2	15.9
60°-70°	491.1	13.1
70°-80°	334.4	8.9
80°-90°	110.4	2.9
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°	973.6	25.9
0°-40°	1588.5	42.2
0°-60°	2825.6	75.1
0°-90°	3761.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3761.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1263	1263	1263	1263	1263	
5°	1258	1258	1253	1259	1260	119
15°	1203	1204	1205	1216	1218	339
25°	1095	1100	1111	1130	1134	504
35°	949	960	980	1007	1017	593
45°	778	795	827	869	884	600
55°	595	615	667	719	737	530
65°	399	433	501	560	581	396
75°	207	254	330	389	408	218
85°	44	85	110	118	118	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1262.9	1262.9	1262.9	1262.9	1262.9
2.5°	1262.9	1262.9	1256.6	1262.9	1262.9
5°	1257.9	1257.9	1252.9	1259.1	1260.4
7.5°	1249.1	1250.4	1245.3	1252.9	1254.1
10°	1236.5	1237.8	1235.3	1242.8	1244.1
12.5°	1221.5	1222.7	1222.7	1231.5	1232.8
15°	1202.7	1203.9	1205.2	1216.5	1217.7
17.5°	1178.8	1182.6	1185.1	1198.9	1201.4
20°	1153.7	1157.5	1162.5	1177.5	1180.1
22.5°	1124.8	1129.8	1138.6	1154.9	1158.7
25°	1094.7	1099.7	1111.0	1129.8	1133.6
27.5°	1060.8	1068.3	1082.1	1102.2	1107.2
30°	1025.6	1033.2	1049.5	1070.8	1078.4
32.5°	988.0	998.0	1016.9	1040.7	1048.2
35°	949.1	960.4	980.5	1006.8	1016.9
37.5°	907.6	920.2	944.0	972.9	985.5
40°	865.0	880.0	905.1	939.0	952.8
42.5°	822.3	836.1	867.5	903.9	918.9
45°	778.3	794.7	827.3	868.7	883.8
47.5°	733.1	749.5	788.4	832.3	846.1
50°	687.9	704.3	748.2	794.7	811.0
52.5°	639.0	660.3	710.5	757.0	773.3
55°	595.0	615.1	666.6	719.3	736.9
57.5°	544.8	568.7	625.2	680.4	699.2
60°	498.4	523.5	583.8	640.2	659.1
62.5°	450.7	478.3	542.3	600.1	621.4
65°	399.2	433.1	500.9	559.9	581.2
67.5°	352.8	387.9	459.5	519.7	538.6
70°	300.0	342.7	415.5	475.8	497.1
72.5°	254.8	297.5	374.1	433.1	454.4
75°	207.1	253.6	330.2	389.2	408.0
77.5°	159.4	210.9	287.5	332.7	339.0
80°	114.2	168.2	238.5	264.9	273.7
82.5°	80.3	129.3	175.8	193.3	198.3
85°	43.9	85.4	110.5	118.0	118.0
87.5°	18.8	36.4	43.9	45.2	46.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)