

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: P388824

Luminaire Tested: **24CZ2-45VHE-UNV-L935-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: P388824  
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-L935-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3760.8 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

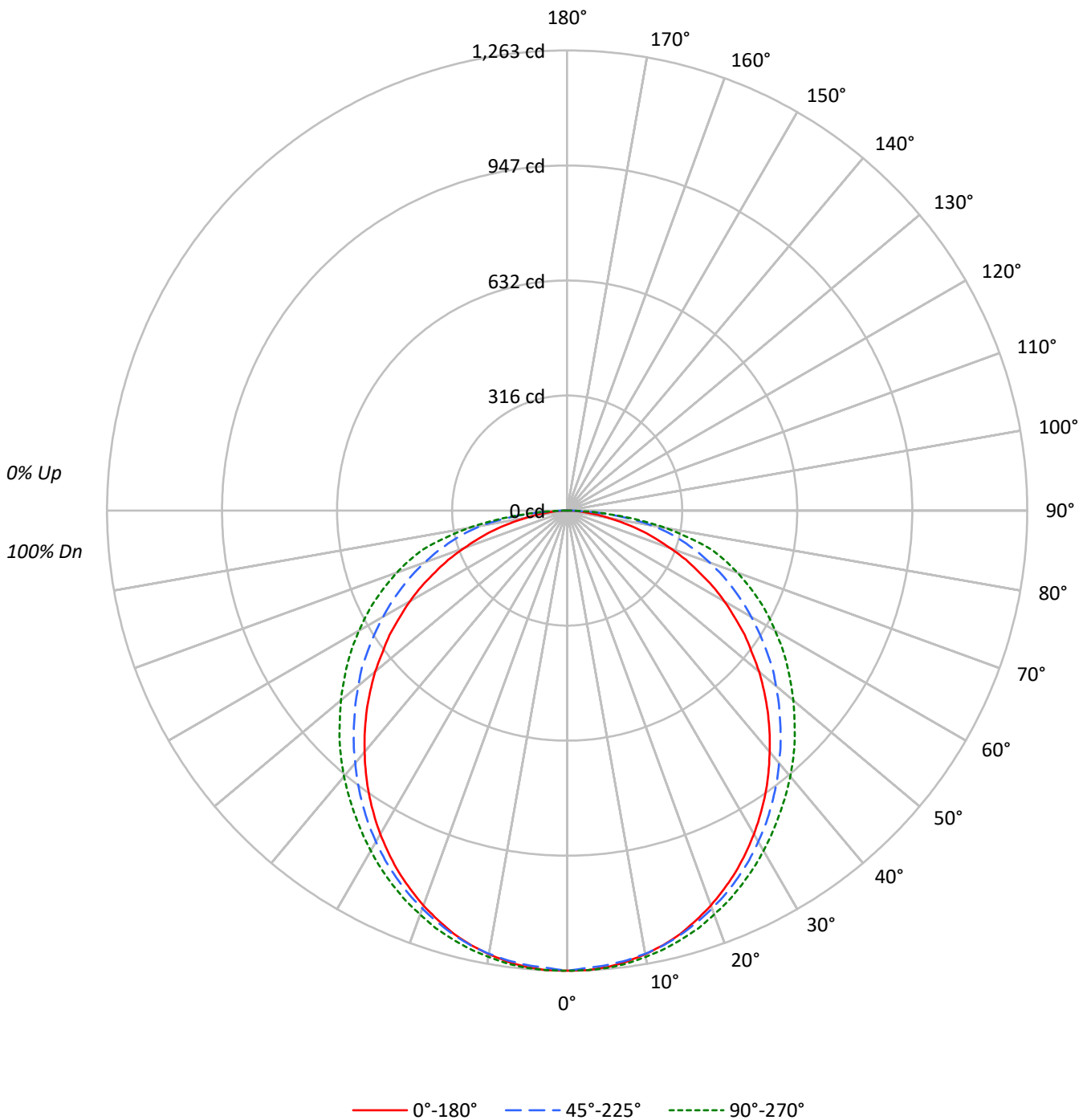
Input Watts (W): 29.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1699	1699	1699
5°	1699	1692	1702
10°	1689	1687	1699
15°	1675	1678	1696
20°	1652	1664	1689
25°	1625	1649	1683
30°	1593	1630	1675
35°	1559	1610	1670
40°	1519	1590	1673
45°	1481	1574	1681
50°	1440	1566	1697
55°	1396	1563	1728
60°	1341	1570	1773
65°	1271	1594	1850
70°	1180	1635	1955
75°	1077	1716	2120
80°	885	1848	2120
85°	678	1706	1822



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.4	3.2
10°-20°	340.9	9.1
20°-30°	513.0	13.6
30°-40°	614.8	16.3
40°-50°	640.7	17.0
50°-60°	596.1	15.9
60°-70°	491.0	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°	973.4	25.9
0°-40°	1588.2	42.2
0°-60°	2825.1	75.1
0°-90°	3760.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3760.8	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°	1202	1204	1205	1216	1218	339
25°	1094	1100	1111	1130	1133	504
35°	949	960	980	1007	1017	593
45°	778	794	827	869	884	600
55°	595	615	666	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°	1262.7	1262.7	1262.7	1262.7	1262.7
2.5°	1262.7	1262.7	1256.4	1262.7	1262.7
5°	1257.7	1257.7	1252.6	1258.9	1260.2
7.5°	1248.9	1250.1	1245.1	1252.6	1253.9
10°	1236.3	1237.6	1235.1	1242.6	1243.8
12.5°	1221.3	1222.5	1222.5	1231.3	1232.6
15°	1202.4	1203.7	1204.9	1216.2	1217.5
17.5°	1178.6	1182.3	1184.9	1198.7	1201.2
20°	1153.5	1157.2	1162.3	1177.3	1179.8
22.5°	1124.6	1129.6	1138.4	1154.7	1158.5
25°	1094.5	1099.5	1110.8	1129.6	1133.4
27.5°	1060.6	1068.1	1081.9	1102.0	1107.0
30°	1025.5	1033.0	1049.3	1070.6	1078.2
32.5°	987.8	997.8	1016.7	1040.5	1048.0
35°	948.9	960.2	980.3	1006.6	1016.7
37.5°	907.5	920.0	943.9	972.7	985.3
40°	864.8	879.9	905.0	938.8	952.7
42.5°	822.1	835.9	867.3	903.7	918.8
45°	778.2	794.5	827.1	868.6	883.6
47.5°	733.0	749.3	788.2	832.2	846.0
50°	687.8	704.1	748.1	794.5	810.8
52.5°	638.9	660.2	710.4	756.9	773.2
55°	594.9	615.0	666.5	719.2	736.8
57.5°	544.7	568.6	625.1	680.3	699.1
60°	498.3	523.4	583.6	640.1	659.0
62.5°	450.6	478.2	542.2	600.0	621.3
65°	399.1	433.0	500.8	559.8	581.1
67.5°	352.7	387.8	459.4	519.6	538.5
70°	300.0	342.7	415.5	475.7	497.0
72.5°	254.8	297.5	374.0	433.0	454.4
75°	207.1	253.5	330.1	389.1	407.9
77.5°	159.4	210.9	287.4	332.6	338.9
80°	114.2	168.2	238.5	264.8	273.6
82.5°	80.3	129.3	175.7	193.3	198.3
85°	43.9	85.3	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)