

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: P388713

Luminaire Tested: **24CZ2-45HE-SQR-UNV-L950-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: P388713
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-45HE-SQR-UNV-L950-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3892.9 lumens
Efficiency: N/A
Efficacy: 110.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

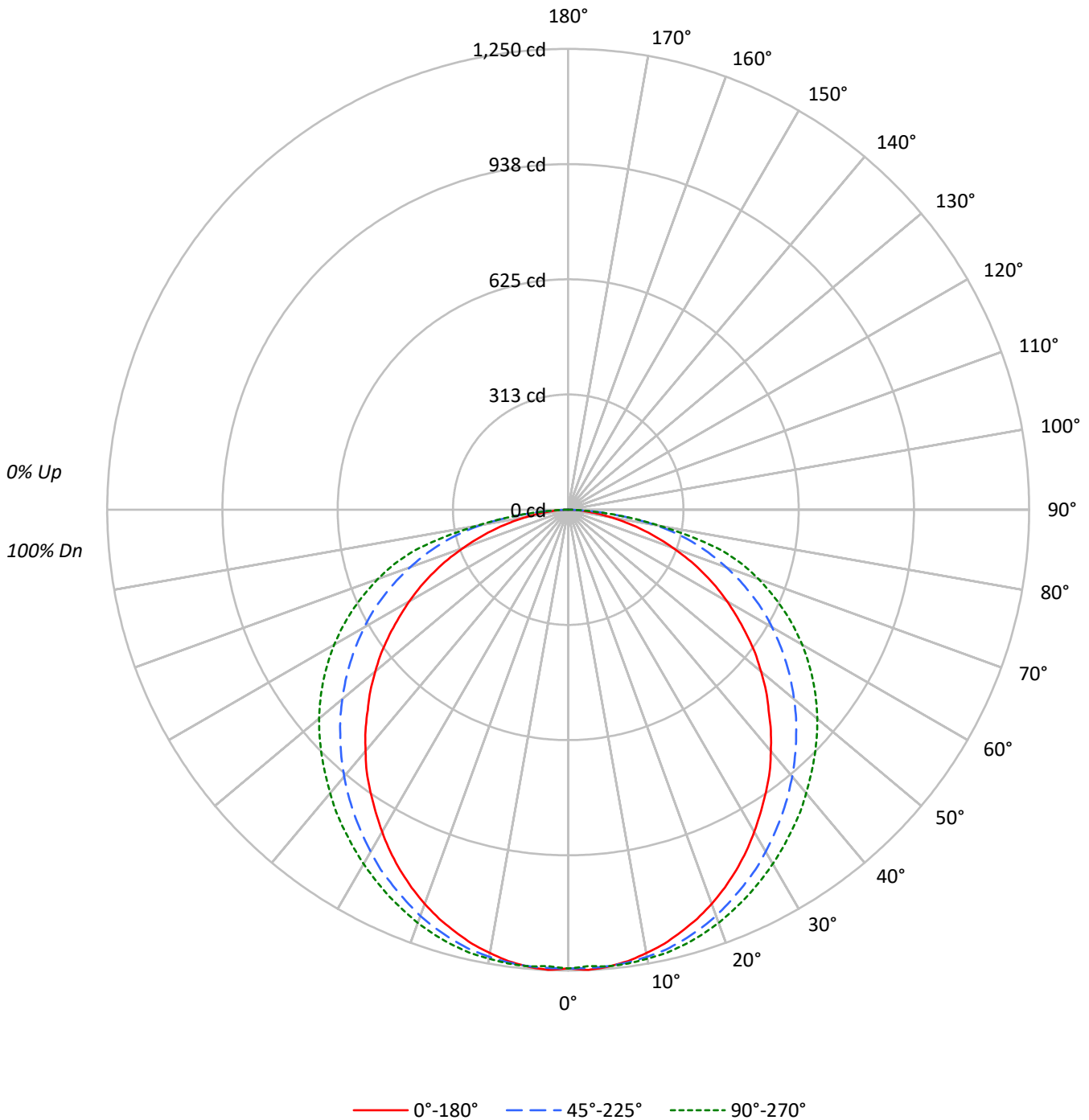
Input Watts (W): 35.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1674	1674	1674
5°	1681	1679	1679
10°	1668	1683	1689
15°	1651	1683	1701
20°	1629	1679	1708
25°	1601	1670	1714
30°	1568	1664	1724
35°	1535	1660	1740
40°	1502	1659	1763
45°	1463	1663	1798
50°	1429	1674	1846
55°	1387	1692	1903
60°	1339	1719	1972
65°	1281	1752	2054
70°	1188	1795	2159
75°	1076	1858	2259
80°	907	1863	1943
85°	695	1409	1409



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.1	3.0
10°-20°	339.8	8.7
20°-30°	516.2	13.3
30°-40°	627.9	16.1
40°-50°	668.5	17.2
50°-60°	636.7	16.4
60°-70°	532.5	13.7
70°-80°	355.0	9.1
80°-90°	98.2	2.5
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°	974.2	25.0
0°-40°	1602.0	41.2
0°-60°	2907.2	74.7
0°-90°	3892.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3892.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1244	1244	1244	1244	1244	
5°	1244	1237	1243	1243	1243	118
15°	1185	1188	1208	1217	1221	334
25°	1078	1093	1125	1144	1154	497
35°	935	962	1010	1044	1059	585
45°	769	810	874	923	945	594
55°	591	643	721	784	811	529
65°	402	462	550	618	645	398
75°	207	272	357	418	434	219
85°	45	84	91	90	91	54
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1244.4	1244.4	1244.4	1244.4	1244.4
2.5°	1249.5	1240.5	1244.4	1244.4	1239.2
5°	1244.4	1236.6	1243.1	1243.1	1243.1
7.5°	1235.4	1228.9	1239.2	1241.8	1241.8
10°	1221.2	1218.7	1231.5	1235.4	1236.6
12.5°	1205.8	1204.5	1222.5	1227.6	1231.5
15°	1185.2	1187.8	1208.4	1217.4	1221.2
17.5°	1163.4	1168.5	1191.7	1204.5	1208.4
20°	1137.7	1145.4	1172.4	1185.2	1192.9
22.5°	1109.4	1121.0	1149.2	1164.7	1173.7
25°	1078.5	1092.7	1124.8	1144.1	1154.4
27.5°	1045.1	1063.1	1100.4	1122.2	1132.5
30°	1009.1	1029.7	1070.8	1096.5	1109.4
32.5°	971.8	996.3	1041.3	1069.5	1085.0
35°	934.6	961.6	1010.4	1043.8	1059.2
37.5°	897.3	924.3	978.3	1014.3	1033.5
40°	854.9	887.0	944.8	984.7	1004.0
42.5°	813.7	848.4	910.1	953.8	974.4
45°	768.7	809.9	874.1	923.0	944.8
47.5°	727.6	768.7	838.1	889.6	914.0
50°	682.6	726.3	799.6	856.1	881.9
52.5°	638.9	683.9	761.0	821.4	847.1
55°	591.3	642.7	721.2	784.2	811.1
57.5°	543.8	599.0	680.0	745.6	772.6
60°	497.5	554.0	638.9	704.5	732.7
62.5°	451.2	507.8	596.5	663.3	690.3
65°	402.4	461.5	550.2	618.3	645.3
67.5°	353.5	415.2	503.9	572.0	597.8
70°	302.1	367.7	456.4	523.2	548.9
72.5°	254.5	320.1	407.5	473.1	497.5
75°	207.0	272.5	357.4	417.8	434.5
77.5°	160.7	226.2	302.1	341.9	345.8
80°	117.0	178.7	240.4	252.0	250.7
82.5°	78.4	133.7	165.8	167.1	171.0
85°	45.0	83.6	91.3	90.0	91.3
87.5°	18.0	29.6	25.7	19.3	19.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)