

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: P391376

Luminaire Tested: **24CZ2-45VHE-HRP-UNV-L950-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: P391376
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: 24CZ2-45VHE-HRP-UNV-L950-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3508.8 lumens
Efficiency: N/A
Efficacy: 118.5 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

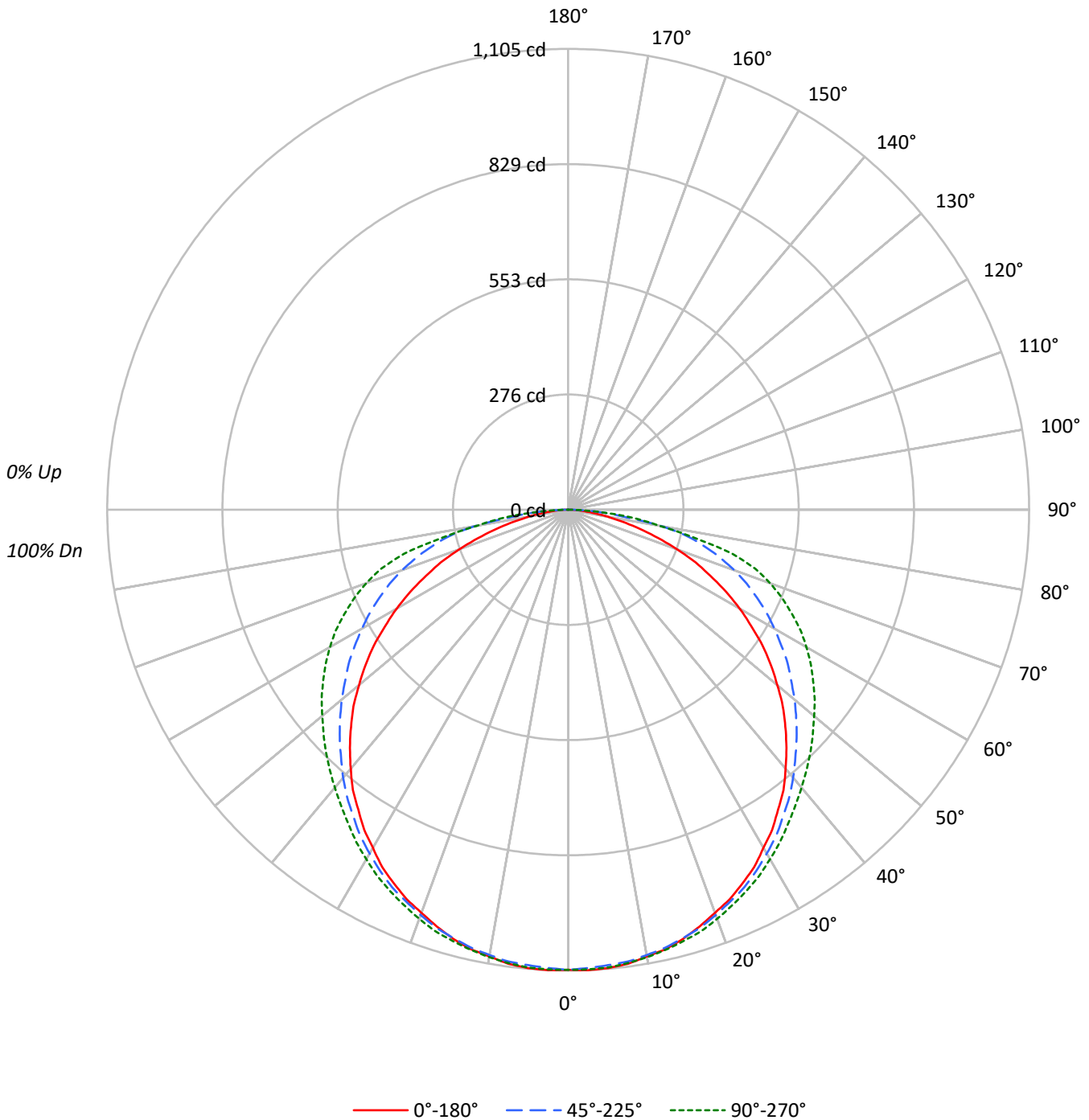
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	1485	1485	1485
5°	1490	1481	1488
10°	1486	1481	1489
15°	1484	1481	1491
20°	1473	1480	1495
25°	1468	1483	1499
30°	1455	1479	1503
35°	1441	1475	1509
40°	1424	1473	1528
45°	1401	1474	1563
50°	1370	1483	1610
55°	1335	1506	1682
60°	1278	1536	1775
65°	1197	1590	1884
70°	1089	1664	2027
75°	923	1755	2117
80°	728	1767	1712
85°	537	1343	1505



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.7	3.0
10°-20°	301.2	8.6
20°-30°	460.7	13.1
30°-40°	563.1	16.0
40°-50°	600.2	17.1
50°-60°	573.9	16.4
60°-70°	486.1	13.9
70°-80°	326.7	9.3
80°-90°	92.2	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°	866.6	24.7
0°-40°	1429.7	40.7
0°-60°	2603.8	74.2
0°-90°	3508.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3508.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1103	1103	1103	1103	1103	
5°	1103	1102	1096	1102	1102	105
15°	1065	1065	1063	1072	1070	300
25°	989	992	999	1008	1009	456
35°	877	884	898	916	919	549
45°	736	748	774	808	822	568
55°	569	590	642	693	717	507
65°	376	414	500	566	592	373
75°	178	242	338	395	407	190
85°	35	71	87	94	98	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1103.4	1103.4	1103.4	1103.4	1103.4
2.5°	1105.2	1105.2	1099.9	1103.4	1103.4
5°	1103.4	1101.7	1096.5	1101.7	1101.7
7.5°	1098.2	1096.5	1093.0	1098.2	1096.5
10°	1087.8	1087.8	1084.3	1089.5	1089.5
12.5°	1079.1	1077.3	1075.6	1082.5	1080.8
15°	1065.1	1065.1	1063.4	1072.1	1070.3
17.5°	1047.7	1049.5	1051.2	1058.2	1059.9
20°	1028.6	1032.1	1033.8	1044.2	1044.2
22.5°	1011.2	1012.9	1016.4	1026.8	1026.8
25°	988.6	992.0	999.0	1007.7	1009.4
27.5°	965.9	967.7	976.4	988.6	990.3
30°	936.3	941.6	952.0	965.9	967.7
32.5°	910.2	915.5	927.6	941.6	945.0
35°	877.2	884.1	898.0	915.5	918.9
37.5°	847.6	852.8	870.2	889.3	894.6
40°	811.0	821.5	838.9	861.5	870.2
42.5°	774.5	784.9	805.8	835.4	845.8
45°	736.2	748.4	774.5	807.5	821.5
47.5°	697.9	711.8	741.4	779.7	795.4
50°	654.4	671.8	708.3	751.9	769.3
52.5°	612.6	633.5	673.5	722.3	744.9
55°	569.1	590.0	642.2	692.7	717.0
57.5°	520.4	548.2	605.7	663.1	689.2
60°	475.1	501.2	570.9	633.5	659.6
62.5°	426.4	461.2	536.0	602.2	628.3
65°	375.9	414.2	499.5	565.6	591.7
67.5°	330.7	372.4	462.9	529.1	555.2
70°	276.7	328.9	422.9	489.1	515.2
72.5°	226.3	283.7	381.1	445.5	469.9
75°	177.5	241.9	337.6	395.1	407.3
77.5°	132.3	200.1	292.4	316.8	308.1
80°	94.0	160.1	228.0	215.8	221.0
82.5°	60.9	121.8	141.0	160.1	165.3
85°	34.8	71.4	87.0	94.0	97.5
87.5°	15.7	26.1	34.8	34.8	33.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)