

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: P391374

Luminaire Tested: **24CZ2-45VHE-HRP-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: P391374
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-SDWPD1-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: 3423.5 lumens
Efficiency: N/A
Efficacy: 115.7 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

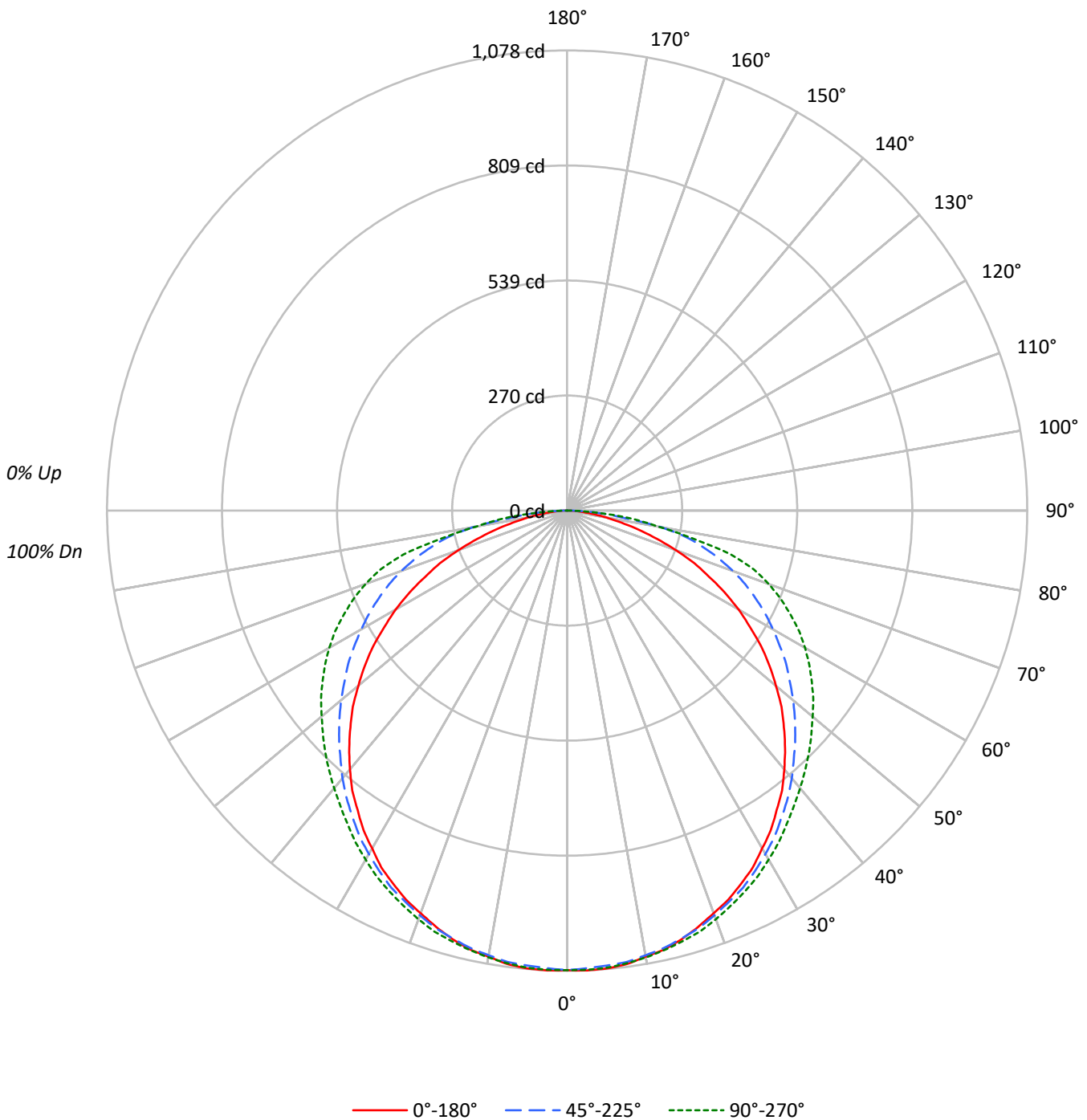
Input Watts (W): 29.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1449	1449	1449
5°	1454	1445	1452
10°	1450	1445	1452
15°	1448	1445	1455
20°	1437	1444	1459
25°	1432	1447	1462
30°	1419	1443	1467
35°	1406	1439	1473
40°	1390	1438	1491
45°	1367	1438	1525
50°	1337	1447	1571
55°	1303	1470	1641
60°	1248	1499	1732
65°	1168	1552	1838
70°	1062	1623	1977
75°	900	1712	2066
80°	711	1724	1671
85°	525	1311	1468



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.1	3.0
10°-20°	293.9	8.6
20°-30°	449.5	13.1
30°-40°	549.5	16.0
40°-50°	585.6	17.1
50°-60°	559.9	16.4
60°-70°	474.3	13.9
70°-80°	318.8	9.3
80°-90°	89.9	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°	845.5	24.7
0°-40°	1394.9	40.7
0°-60°	2540.5	74.2
0°-90°	3423.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3423.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1077	1077	1077	1077	1077	
5°	1077	1075	1070	1075	1075	102
15°	1039	1039	1038	1046	1044	293
25°	964	968	975	983	985	445
35°	856	863	876	893	897	536
45°	718	730	756	788	802	554
55°	555	576	627	676	700	495
65°	367	404	487	552	577	364
75°	173	236	329	386	397	185
85°	34	70	85	92	95	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1076.6	1076.6	1076.6	1076.6	1076.6
2.5°	1078.3	1078.3	1073.2	1076.6	1076.6
5°	1076.6	1074.9	1069.8	1074.9	1074.9
7.5°	1071.5	1069.8	1066.4	1071.5	1069.8
10°	1061.3	1061.3	1057.9	1063.0	1063.0
12.5°	1052.8	1051.1	1049.4	1056.2	1054.5
15°	1039.2	1039.2	1037.5	1046.0	1044.3
17.5°	1022.3	1024.0	1025.7	1032.4	1034.1
20°	1003.6	1007.0	1008.7	1018.9	1018.9
22.5°	986.6	988.3	991.7	1001.9	1001.9
25°	964.5	967.9	974.7	983.2	984.9
27.5°	942.4	944.1	952.6	964.5	966.2
30°	913.6	918.7	928.9	942.4	944.1
32.5°	888.1	893.2	905.1	918.7	922.1
35°	855.8	862.6	876.2	893.2	896.6
37.5°	827.0	832.1	849.0	867.7	872.8
40°	791.3	801.5	818.5	840.6	849.0
42.5°	755.7	765.8	786.2	815.1	825.3
45°	718.3	730.2	755.7	787.9	801.5
47.5°	680.9	694.5	723.4	760.7	776.0
50°	638.5	655.5	691.1	733.6	750.6
52.5°	597.7	618.1	657.2	704.7	726.8
55°	555.3	575.7	626.6	675.8	699.6
57.5°	507.7	534.9	590.9	647.0	672.4
60°	463.6	489.1	557.0	618.1	643.6
62.5°	416.0	450.0	523.0	587.5	613.0
65°	366.8	404.1	487.4	551.9	577.4
67.5°	322.6	363.4	451.7	516.2	541.7
70°	270.0	320.9	412.6	477.2	502.6
72.5°	220.8	276.8	371.9	434.7	458.5
75°	173.2	236.0	329.4	385.5	397.4
77.5°	129.1	195.3	285.3	309.1	300.6
80°	91.7	156.2	222.5	210.6	215.7
82.5°	59.4	118.9	137.5	156.2	161.3
85°	34.0	69.6	84.9	91.7	95.1
87.5°	15.3	25.5	34.0	34.0	32.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)