

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: P391375

Luminaire Tested: **24CZ2-45VHE-HRP-UNV-L950-CD1-SWPD1-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: P391375  
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-SWPD1-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: 3465.3 lumens  
Efficiency: N/A  
Efficacy: 117.1 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

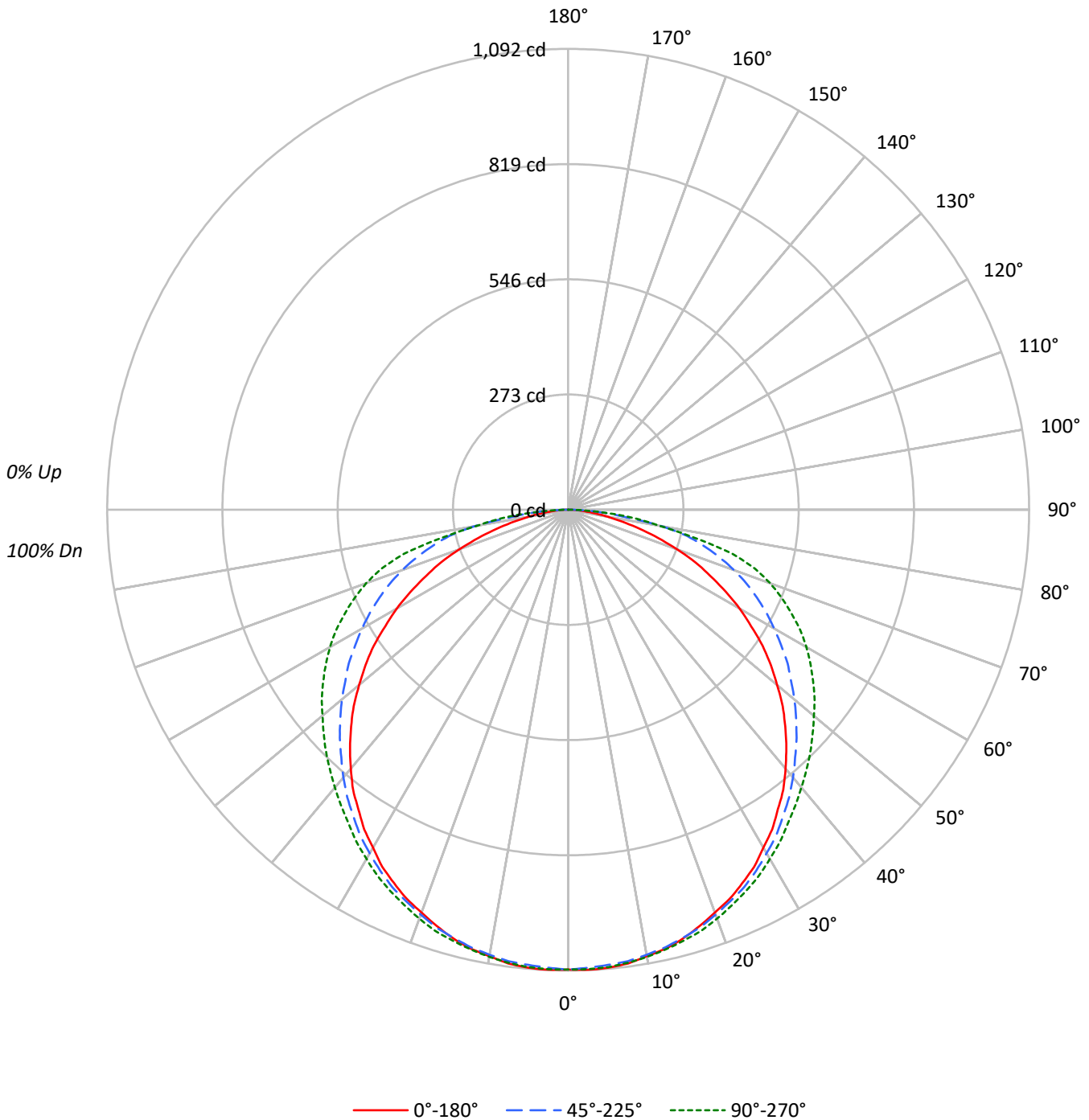
Input Watts (W): 29.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1466	1466	1466
5°	1472	1463	1469
10°	1468	1463	1470
15°	1465	1463	1472
20°	1454	1462	1477
25°	1449	1465	1480
30°	1437	1461	1485
35°	1423	1457	1491
40°	1407	1455	1509
45°	1384	1455	1544
50°	1353	1464	1590
55°	1319	1488	1661
60°	1263	1517	1753
65°	1182	1571	1861
70°	1075	1643	2002
75°	911	1734	2091
80°	719	1745	1691
85°	531	1326	1487



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.4	3.0
10°-20°	297.5	8.6
20°-30°	454.9	13.1
30°-40°	556.2	16.0
40°-50°	592.8	17.1
50°-60°	566.8	16.4
60°-70°	480.1	13.9
70°-80°	322.7	9.3
80°-90°	91.0	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°	855.8	24.7
0°-40°	1412.0	40.7
0°-60°	2571.5	74.2
0°-90°	3465.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3465.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1090	1090	1090	1090	1090	
5°	1090	1088	1083	1088	1088	104
15°	1052	1052	1050	1059	1057	297
25°	976	980	987	995	997	450
35°	866	873	887	904	908	543
45°	727	739	765	798	811	561
55°	562	583	634	684	708	501
65°	371	409	493	559	584	369
75°	175	239	334	390	402	188
85°	34	70	86	93	96	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1089.7	1089.7	1089.7	1089.7	1089.7
2.5°	1091.5	1091.5	1086.3	1089.7	1089.7
5°	1089.7	1088.0	1082.9	1088.0	1088.0
7.5°	1084.6	1082.9	1079.4	1084.6	1082.9
10°	1074.3	1074.3	1070.8	1076.0	1076.0
12.5°	1065.7	1064.0	1062.2	1069.1	1067.4
15°	1051.9	1051.9	1050.2	1058.8	1057.1
17.5°	1034.7	1036.5	1038.2	1045.0	1046.8
20°	1015.8	1019.3	1021.0	1031.3	1031.3
22.5°	998.6	1000.4	1003.8	1014.1	1014.1
25°	976.3	979.7	986.6	995.2	996.9
27.5°	954.0	955.7	964.3	976.3	978.0
30°	924.7	929.9	940.2	954.0	955.7
32.5°	898.9	904.1	916.1	929.9	933.3
35°	866.3	873.2	886.9	904.1	907.5
37.5°	837.1	842.2	859.4	878.3	883.5
40°	801.0	811.3	828.5	850.8	859.4
42.5°	764.9	775.2	795.8	825.0	835.4
45°	727.1	739.1	764.9	797.5	811.3
47.5°	689.3	703.0	732.2	770.0	785.5
50°	646.3	663.5	699.6	742.5	759.7
52.5°	605.0	625.7	665.2	713.3	735.7
55°	562.1	582.7	634.2	684.1	708.2
57.5°	513.9	541.4	598.2	654.9	680.7
60°	469.2	495.0	563.8	625.7	651.4
62.5°	421.1	455.5	529.4	594.7	620.5
65°	371.3	409.1	493.3	558.6	584.4
67.5°	326.6	367.8	457.2	522.5	548.3
70°	273.3	324.9	417.7	483.0	508.8
72.5°	223.4	280.2	376.4	440.0	464.1
75°	175.3	238.9	333.5	390.2	402.2
77.5°	130.6	197.7	288.8	312.8	304.2
80°	92.8	158.1	225.2	213.1	218.3
82.5°	60.2	120.3	139.2	158.1	163.3
85°	34.4	70.5	85.9	92.8	96.3
87.5°	15.5	25.8	34.4	34.4	32.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)