

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: P388854

Luminaire Tested: **24CZ2-50VHE-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: P388854  
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: 24CZ2-50VHE-UNV-L950-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4479.9 lumens  
Efficiency: N/A  
Efficacy: 137.0 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

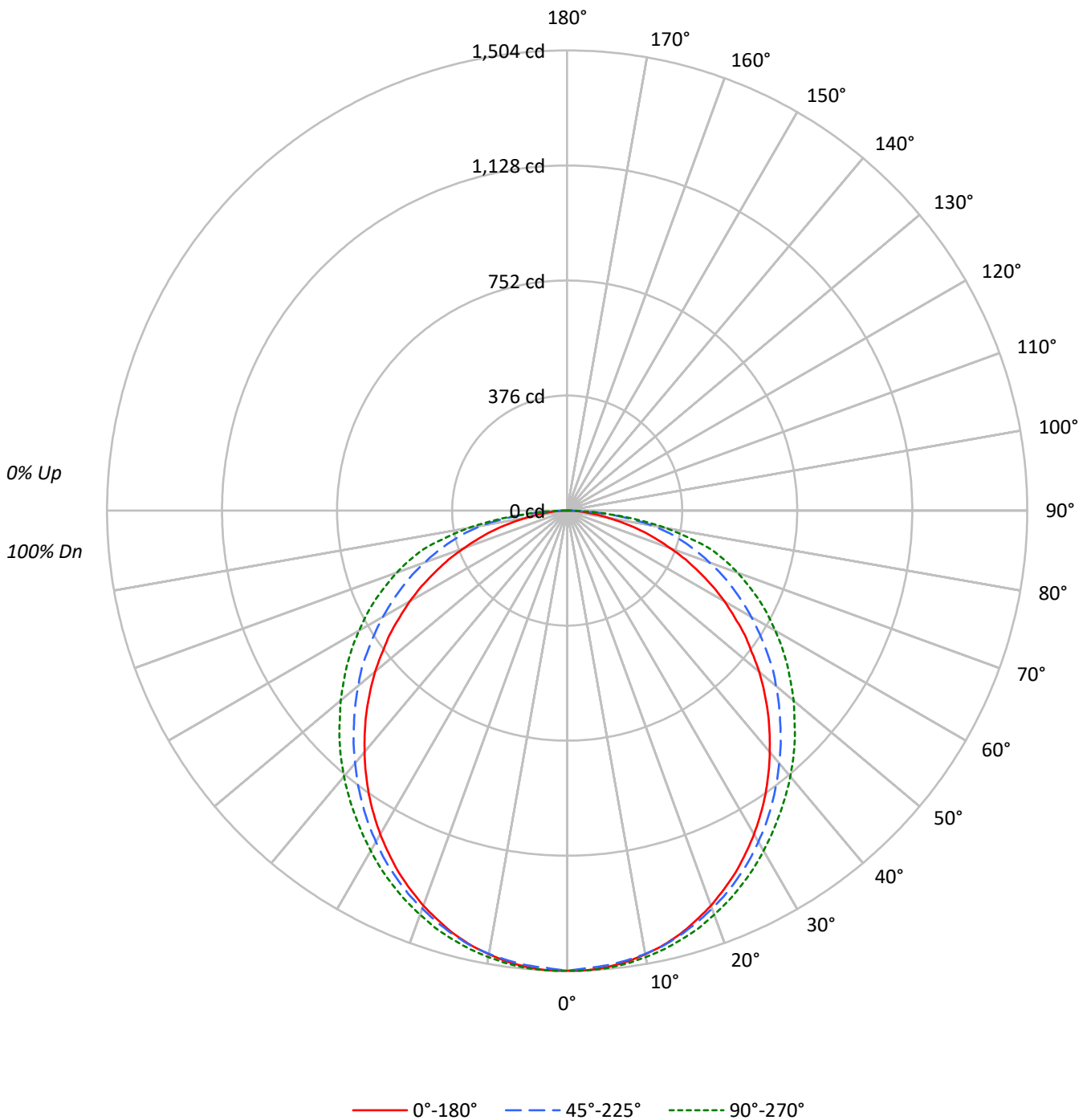
Input Watts (W): 32.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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

	0°	45°	90°
0°	2024	2024	2024
5°	2023	2015	2027
10°	2012	2010	2024
15°	1995	1999	2020
20°	1967	1982	2012
25°	1936	1964	2004
30°	1898	1942	1995
35°	1857	1918	1989
40°	1809	1893	1993
45°	1764	1875	2003
50°	1715	1865	2022
55°	1662	1862	2059
60°	1597	1871	2112
65°	1514	1899	2204
70°	1406	1947	2329
75°	1282	2044	2526
80°	1055	2201	2525
85°	807	2032	2169



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	142.3	3.2
10°-20°	406.1	9.1
20°-30°	611.1	13.6
30°-40°	732.4	16.3
40°-50°	763.2	17.0
50°-60°	710.1	15.9
60°-70°	584.8	13.1
70°-80°	398.3	8.9
80°-90°	131.5	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°	1159.5	25.9
0°-40°	1891.9	42.2
0°-60°	3365.2	75.1
0°-90°	4479.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4479.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1504	1504	1504	1504	1504	
5°	1498	1498	1492	1500	1501	142
15°	1432	1434	1435	1449	1450	404
25°	1304	1310	1323	1346	1350	600
35°	1130	1144	1168	1199	1211	707
45°	927	946	985	1035	1053	715
55°	709	733	794	857	878	632
65°	476	516	597	667	692	472
75°	247	302	393	464	486	260
85°	52	102	132	140	140	65
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1504.1	1504.1	1504.1	1504.1	1504.1
2.5°	1504.1	1504.1	1496.6	1504.1	1504.1
5°	1498.1	1498.1	1492.1	1499.6	1501.1
7.5°	1487.7	1489.2	1483.2	1492.1	1493.6
10°	1472.7	1474.2	1471.2	1480.2	1481.7
12.5°	1454.8	1456.3	1456.3	1466.7	1468.2
15°	1432.3	1433.8	1435.3	1448.8	1450.3
17.5°	1403.9	1408.4	1411.4	1427.9	1430.8
20°	1374.0	1378.5	1384.5	1402.4	1405.4
22.5°	1339.6	1345.6	1356.1	1375.5	1380.0
25°	1303.8	1309.7	1323.2	1345.6	1350.1
27.5°	1263.4	1272.4	1288.8	1312.7	1318.7
30°	1221.5	1230.5	1249.9	1275.4	1284.3
32.5°	1176.7	1188.6	1211.1	1239.5	1248.4
35°	1130.3	1143.8	1167.7	1199.1	1211.1
37.5°	1081.0	1095.9	1124.3	1158.7	1173.7
40°	1030.2	1048.1	1078.0	1118.4	1134.8
42.5°	979.3	995.8	1033.1	1076.5	1094.4
45°	927.0	946.4	985.3	1034.6	1052.6
47.5°	873.2	892.6	938.9	991.3	1007.7
50°	819.3	838.8	891.1	946.4	965.9
52.5°	761.0	786.4	846.2	901.6	921.0
55°	708.7	732.6	793.9	856.7	877.6
57.5°	648.9	677.3	744.6	810.4	832.8
60°	593.6	623.5	695.2	762.5	784.9
62.5°	536.8	569.6	645.9	714.7	740.1
65°	475.5	515.8	596.6	666.8	692.2
67.5°	420.1	462.0	547.2	619.0	641.4
70°	357.3	408.2	494.9	566.7	592.1
72.5°	303.5	354.3	445.6	515.8	541.2
75°	246.7	302.0	393.2	463.5	485.9
77.5°	189.9	251.2	342.4	396.2	403.7
80°	136.1	200.3	284.1	315.5	325.9
82.5°	95.7	154.0	209.3	230.3	236.2
85°	52.3	101.7	131.6	140.5	140.5
87.5°	22.4	43.4	52.3	53.8	55.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)