

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: P391784

Luminaire Tested: **24CZ2-85VHE-RDP-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: P391784  
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: 24CZ2-85VHE-RDP-UNV-L950-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5244.4 lumens  
Efficiency: N/A  
Efficacy: 90.6 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

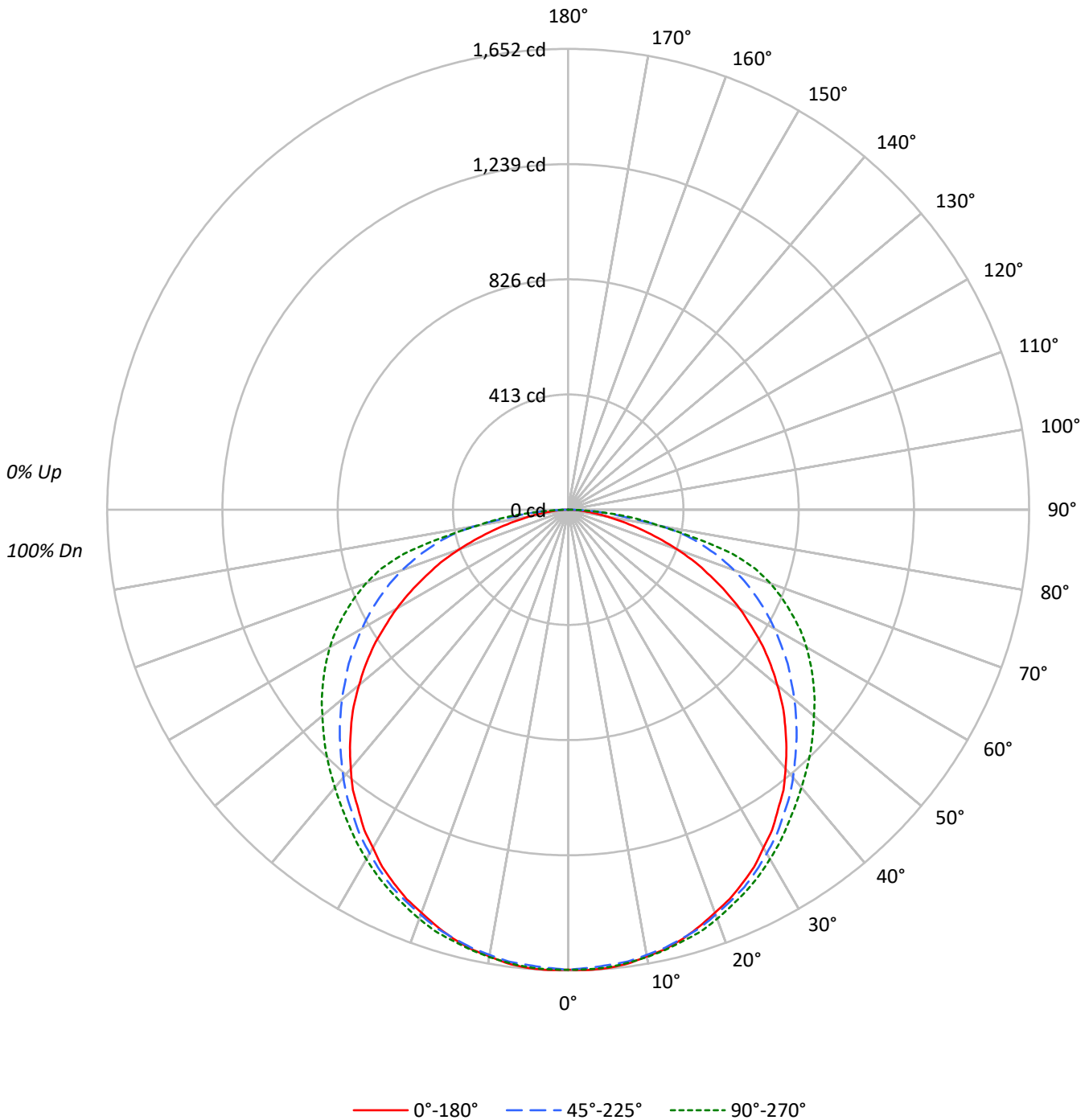
Input Watts (W): 57.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2219	2219	2219
5°	2227	2213	2224
10°	2221	2214	2225
15°	2218	2214	2228
20°	2201	2212	2235
25°	2193	2217	2240
30°	2174	2211	2247
35°	2153	2205	2256
40°	2129	2202	2284
45°	2094	2203	2336
50°	2047	2216	2407
55°	1995	2252	2514
60°	1911	2296	2653
65°	1789	2377	2816
70°	1627	2487	3029
75°	1379	2623	3164
80°	1089	2641	2560
85°	803	2008	2249



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.4	3.0
10°-20°	450.2	8.6
20°-30°	688.5	13.1
30°-40°	841.7	16.0
40°-50°	897.1	17.1
50°-60°	857.7	16.4
60°-70°	726.6	13.9
70°-80°	488.3	9.3
80°-90°	137.8	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°	1295.2	24.7
0°-40°	2136.9	40.7
0°-60°	3891.7	74.2
0°-90°	5244.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5244.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1649	1649	1649	1649	1649	
5°	1649	1647	1639	1647	1647	157
15°	1592	1592	1589	1602	1600	449
25°	1478	1483	1493	1506	1509	681
35°	1311	1322	1342	1368	1374	821
45°	1100	1119	1158	1207	1228	849
55°	851	882	960	1035	1072	758
65°	562	619	747	845	884	558
75°	265	362	505	590	609	284
85°	52	107	130	140	146	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1649.2	1649.2	1649.2	1649.2	1649.2
2.5°	1651.8	1651.8	1644.0	1649.2	1649.2
5°	1649.2	1646.6	1638.8	1646.6	1646.6
7.5°	1641.4	1638.8	1633.6	1641.4	1638.8
10°	1625.8	1625.8	1620.6	1628.4	1628.4
12.5°	1612.8	1610.2	1607.6	1618.0	1615.4
15°	1592.0	1592.0	1589.4	1602.4	1599.8
17.5°	1566.0	1568.6	1571.2	1581.6	1584.2
20°	1537.4	1542.6	1545.2	1560.8	1560.8
22.5°	1511.3	1513.9	1519.1	1534.8	1534.8
25°	1477.5	1482.7	1493.1	1506.1	1508.7
27.5°	1443.7	1446.3	1459.3	1477.5	1480.1
30°	1399.5	1407.3	1422.9	1443.7	1446.3
32.5°	1360.5	1368.3	1386.5	1407.3	1412.5
35°	1311.0	1321.5	1342.3	1368.3	1373.5
37.5°	1266.8	1274.6	1300.6	1329.3	1337.1
40°	1212.2	1227.8	1253.8	1287.6	1300.6
42.5°	1157.6	1173.2	1204.4	1248.6	1264.2
45°	1100.3	1118.6	1157.6	1207.0	1227.8
47.5°	1043.1	1063.9	1108.1	1165.4	1188.8
50°	978.1	1004.1	1058.7	1123.8	1149.8
52.5°	915.7	946.9	1006.7	1079.5	1113.3
55°	850.6	881.8	959.9	1035.3	1071.7
57.5°	777.8	819.4	905.2	991.1	1030.1
60°	710.2	749.2	853.2	946.9	985.9
62.5°	637.3	689.3	801.2	900.0	939.1
65°	561.9	619.1	746.6	845.4	884.4
67.5°	494.2	556.7	691.9	790.8	829.8
70°	413.6	491.6	632.1	731.0	770.0
72.5°	338.2	424.0	569.7	665.9	702.3
75°	265.3	361.6	504.6	590.5	608.7
77.5°	197.7	299.1	437.0	473.4	460.4
80°	140.5	239.3	340.8	322.6	330.4
82.5°	91.0	182.1	210.7	239.3	247.1
85°	52.0	106.7	130.1	140.5	145.7
87.5°	23.4	39.0	52.0	52.0	49.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)