

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: P388978

Luminaire Tested: **24CZ2-65-SQR-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: P388978  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-65-SQR-UNV-L950-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5651.8 lumens  
Efficiency: N/A  
Efficacy: 90.0 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

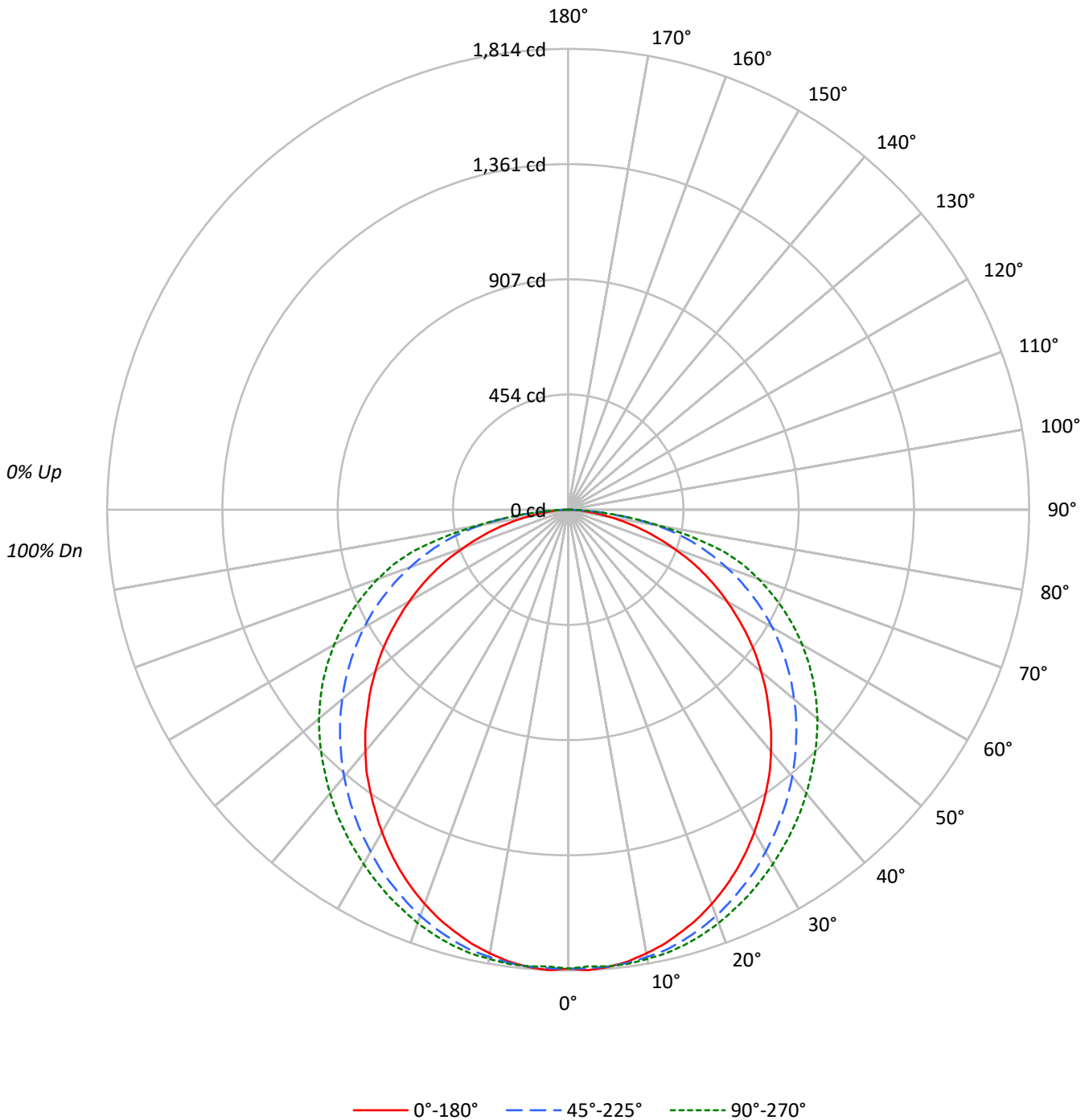
Input Watts (W): 62.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

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

	0°	45°	90°
0°	2431	2431	2431
5°	2440	2437	2437
10°	2422	2443	2453
15°	2397	2444	2470
20°	2365	2437	2480
25°	2325	2424	2488
30°	2276	2415	2502
35°	2229	2409	2526
40°	2180	2409	2560
45°	2124	2415	2610
50°	2074	2430	2680
55°	2014	2456	2762
60°	1944	2496	2863
65°	1860	2543	2983
70°	1725	2606	3135
75°	1562	2697	3279
80°	1316	2704	2820
85°	1008	2046	2046



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	171.5	3.0
10°-20°	493.4	8.7
20°-30°	749.4	13.3
30°-40°	911.6	16.1
40°-50°	970.5	17.2
50°-60°	924.4	16.4
60°-70°	773.0	13.7
70°-80°	515.4	9.1
80°-90°	142.6	2.5
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°	1414.3	25.0
0°-40°	2325.9	41.2
0°-60°	4220.8	74.7
0°-90°	5651.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5651.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1807	1807	1807	1807	1807	
5°	1807	1795	1805	1805	1805	171
15°	1721	1724	1754	1767	1773	485
25°	1566	1586	1633	1661	1676	721
35°	1357	1396	1467	1515	1538	849
45°	1116	1176	1269	1340	1372	863
55°	858	933	1047	1138	1178	767
65°	584	670	799	898	937	577
75°	300	396	519	607	631	318
85°	65	121	132	131	132	79
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1806.6	1806.6	1806.6	1806.6	1806.6
2.5°	1814.1	1801.0	1806.6	1806.6	1799.1
5°	1806.6	1795.4	1804.7	1804.7	1804.7
7.5°	1793.5	1784.2	1799.1	1802.9	1802.9
10°	1773.0	1769.3	1787.9	1793.5	1795.4
12.5°	1750.6	1748.7	1774.9	1782.3	1787.9
15°	1720.7	1724.5	1754.3	1767.4	1773.0
17.5°	1689.0	1696.5	1730.1	1748.7	1754.3
20°	1651.7	1662.9	1702.1	1720.7	1731.9
22.5°	1610.6	1627.4	1668.5	1690.9	1703.9
25°	1565.8	1586.4	1633.0	1661.0	1675.9
27.5°	1517.3	1543.4	1597.6	1629.3	1644.2
30°	1465.1	1494.9	1554.6	1592.0	1610.6
32.5°	1410.9	1446.4	1511.7	1552.8	1575.2
35°	1356.8	1396.0	1466.9	1515.4	1537.8
37.5°	1302.7	1341.9	1420.3	1472.5	1500.5
40°	1241.1	1287.8	1371.7	1429.6	1457.6
42.5°	1181.4	1231.8	1321.3	1384.8	1414.7
45°	1116.1	1175.8	1269.1	1340.0	1371.7
47.5°	1056.3	1116.1	1216.8	1291.5	1326.9
50°	991.0	1054.5	1160.8	1243.0	1280.3
52.5°	927.6	992.9	1104.9	1192.6	1229.9
55°	858.5	933.2	1047.0	1138.5	1177.6
57.5°	789.5	869.7	987.3	1082.5	1121.7
60°	722.3	804.4	927.6	1022.7	1063.8
62.5°	655.1	737.2	866.0	963.0	1002.2
65°	584.2	670.0	798.8	897.7	936.9
67.5°	513.2	602.8	731.6	830.5	867.8
70°	438.6	533.8	662.5	759.6	796.9
72.5°	369.5	464.7	591.6	686.8	722.3
75°	300.5	395.7	518.8	606.6	630.8
77.5°	233.3	328.5	438.6	496.4	502.0
80°	169.8	259.4	349.0	365.8	363.9
82.5°	113.8	194.1	240.8	242.6	248.2
85°	65.3	121.3	132.5	130.6	132.5
87.5°	26.1	42.9	37.3	28.0	28.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)