

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: P388883

Luminaire Tested: **24CZ2-55VHE-SQR-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: P388883  
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: 24CZ2-55VHE-SQR-UNV-L950-CD1-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: 4850.3 lumens  
Efficiency: N/A  
Efficacy: 134.4 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

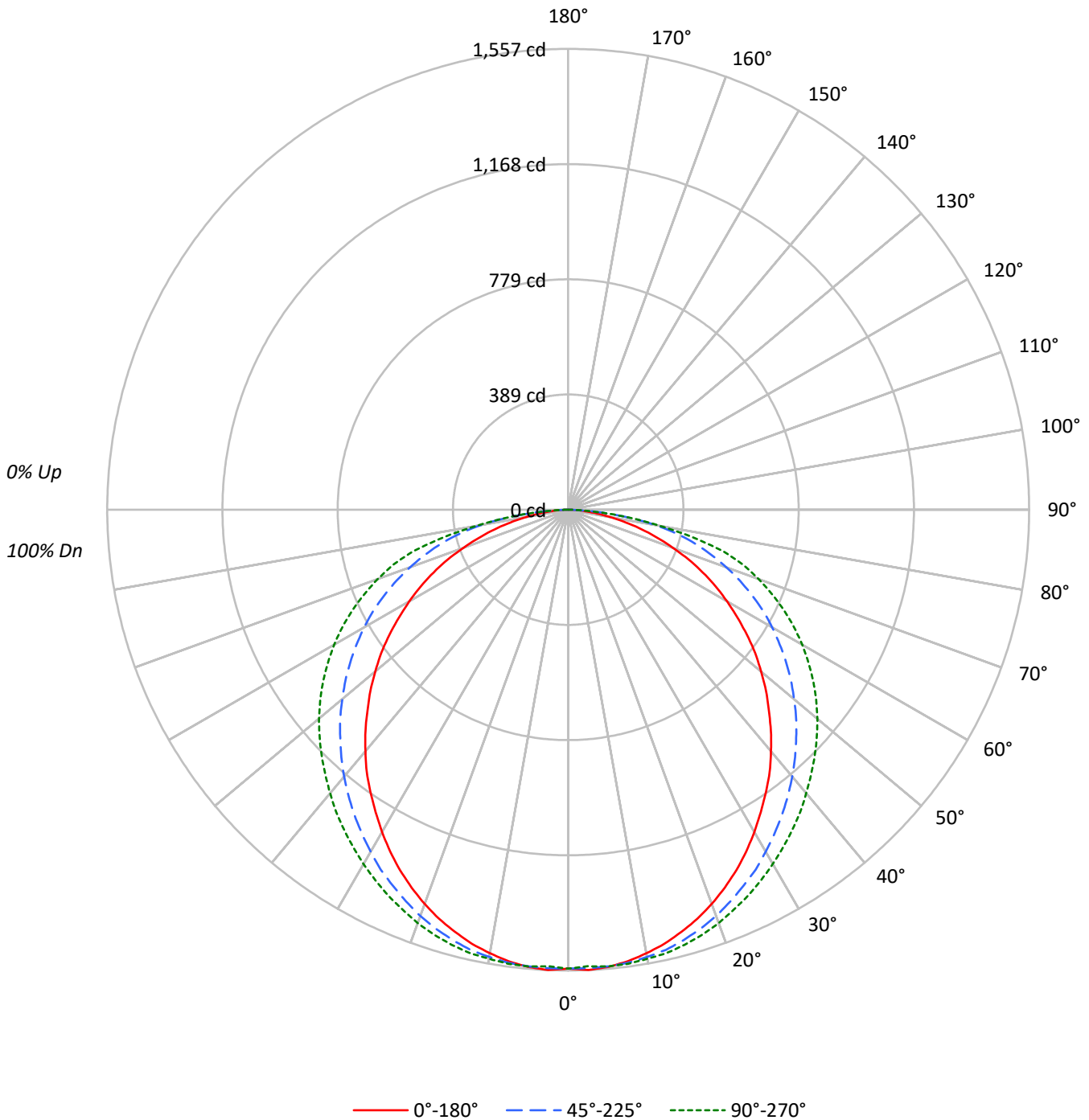
Input Watts (W): 36.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20			20			20			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°	2086	2086	2086
5°	2094	2092	2092
10°	2079	2096	2105
15°	2057	2097	2120
20°	2030	2091	2128
25°	1995	2080	2135
30°	1953	2073	2147
35°	1913	2068	2168
40°	1871	2068	2197
45°	1823	2072	2240
50°	1780	2085	2300
55°	1728	2108	2371
60°	1668	2142	2457
65°	1596	2182	2560
70°	1481	2237	2690
75°	1341	2315	2815
80°	1129	2321	2420
85°	866	1755	1755



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	147.2	3.0
10°-20°	423.4	8.7
20°-30°	643.1	13.3
30°-40°	782.3	16.1
40°-50°	832.9	17.2
50°-60°	793.3	16.4
60°-70°	663.4	13.7
70°-80°	442.3	9.1
80°-90°	122.4	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°	1213.7	25.0
0°-40°	1996.0	41.2
0°-60°	3622.2	74.7
0°-90°	4850.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4850.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1550	1550	1550	1550	1550	
5°	1550	1541	1549	1549	1549	147
15°	1477	1480	1506	1517	1522	416
25°	1344	1361	1401	1426	1438	619
35°	1164	1198	1259	1300	1320	729
45°	958	1009	1089	1150	1177	740
55°	737	801	898	977	1011	659
65°	501	575	686	770	804	495
75°	258	340	445	520	541	273
85°	56	104	114	112	114	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1550.4	1550.4	1550.4	1550.4	1550.4
2.5°	1556.8	1545.6	1550.4	1550.4	1544.0
5°	1550.4	1540.8	1548.8	1548.8	1548.8
7.5°	1539.2	1531.2	1544.0	1547.2	1547.2
10°	1521.6	1518.4	1534.4	1539.2	1540.8
12.5°	1502.3	1500.7	1523.2	1529.6	1534.4
15°	1476.7	1479.9	1505.5	1516.8	1521.6
17.5°	1449.5	1455.9	1484.7	1500.7	1505.5
20°	1417.5	1427.1	1460.7	1476.7	1486.3
22.5°	1382.2	1396.6	1431.9	1451.1	1462.3
25°	1343.8	1361.4	1401.4	1425.5	1438.3
27.5°	1302.1	1324.6	1371.0	1398.2	1411.0
30°	1257.3	1282.9	1334.2	1366.2	1382.2
32.5°	1210.8	1241.3	1297.3	1332.6	1351.8
35°	1164.4	1198.0	1258.9	1300.5	1319.8
37.5°	1117.9	1151.6	1218.9	1263.7	1287.7
40°	1065.1	1105.1	1177.2	1226.9	1250.9
42.5°	1013.8	1057.1	1134.0	1188.4	1214.0
45°	957.8	1009.0	1089.1	1150.0	1177.2
47.5°	906.5	957.8	1044.3	1108.3	1138.8
50°	850.5	904.9	996.2	1066.7	1098.7
52.5°	796.0	852.1	948.2	1023.5	1055.5
55°	736.8	800.8	898.5	977.0	1010.6
57.5°	677.5	746.4	847.3	929.0	962.6
60°	619.8	690.3	796.0	877.7	912.9
62.5°	562.2	632.6	743.2	826.4	860.1
65°	501.3	575.0	685.5	770.4	804.0
67.5°	440.5	517.3	627.8	712.7	744.8
70°	376.4	458.1	568.6	651.9	683.9
72.5°	317.1	398.8	507.7	589.4	619.8
75°	257.9	339.5	445.3	520.5	541.4
77.5°	200.2	281.9	376.4	426.0	430.8
80°	145.7	222.6	299.5	313.9	312.3
82.5°	97.7	166.6	206.6	208.2	213.0
85°	56.1	104.1	113.7	112.1	113.7
87.5°	22.4	36.8	32.0	24.0	24.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)