

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: P388858

Luminaire Tested: **24CZ2-55HE-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: P388858  
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: 24CZ2-55HE-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: 4784.9 lumens  
Efficiency: N/A  
Efficacy: 110.0 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

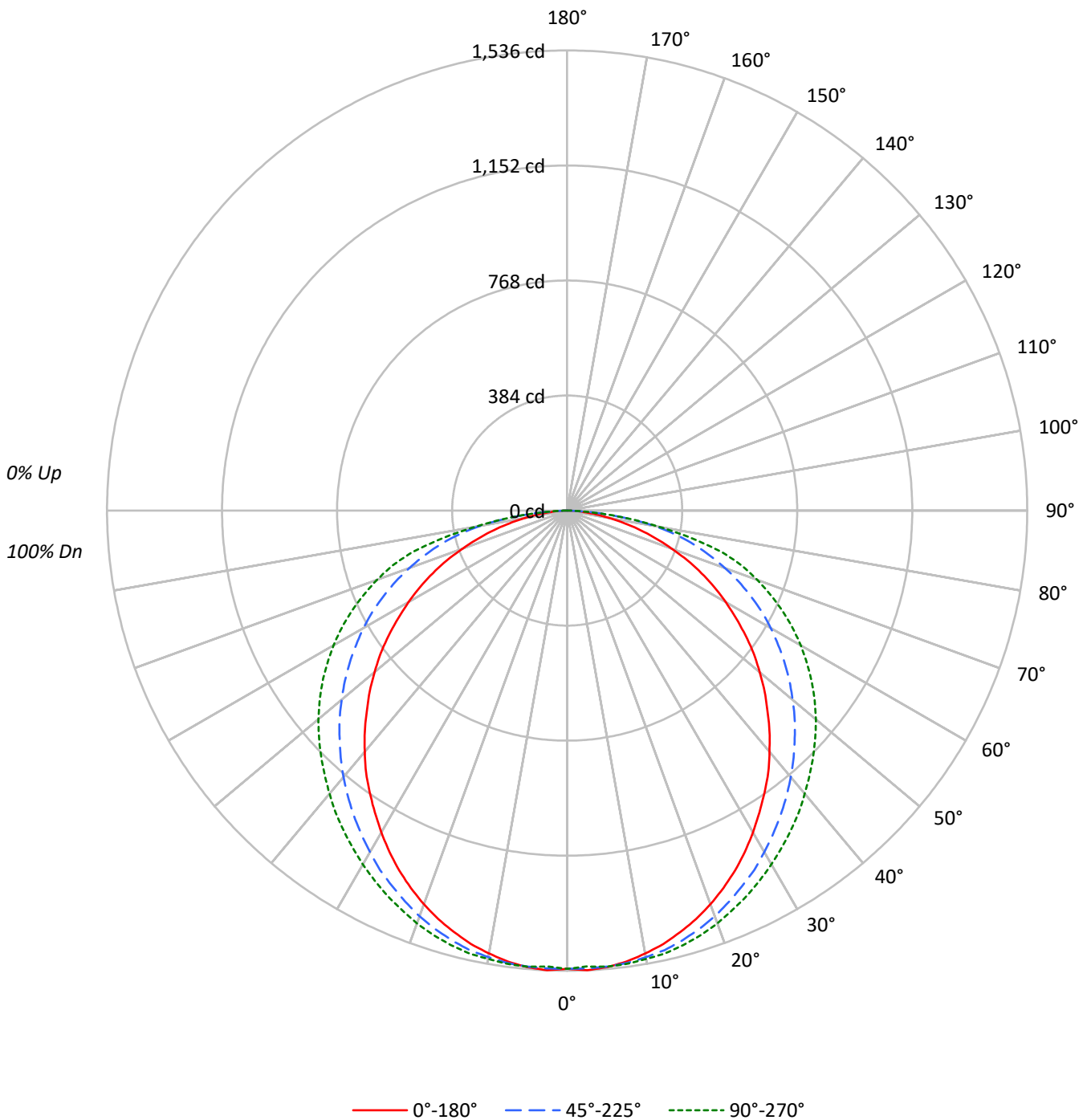
Input Watts (W): 43.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2058	2058	2058
5°	2066	2064	2064
10°	2051	2068	2077
15°	2029	2069	2091
20°	2002	2063	2100
25°	1968	2052	2106
30°	1927	2045	2119
35°	1887	2040	2139
40°	1845	2040	2167
45°	1798	2044	2210
50°	1756	2057	2269
55°	1705	2079	2339
60°	1646	2113	2423
65°	1575	2153	2525
70°	1461	2207	2654
75°	1323	2284	2777
80°	1114	2290	2387
85°	854	1732	1732



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	145.2	3.0
10°-20°	417.7	8.7
20°-30°	634.5	13.3
30°-40°	771.7	16.1
40°-50°	821.7	17.2
50°-60°	782.6	16.4
60°-70°	654.5	13.7
70°-80°	436.4	9.1
80°-90°	120.7	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°	1197.4	25.0
0°-40°	1969.1	41.2
0°-60°	3573.3	74.7
0°-90°	4784.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4784.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1530	1530	1530	1530	1530	
5°	1530	1520	1528	1528	1528	145
15°	1457	1460	1485	1496	1501	411
25°	1326	1343	1382	1406	1419	610
35°	1149	1182	1242	1283	1302	719
45°	945	995	1074	1134	1161	730
55°	727	790	886	964	997	650
65°	495	567	676	760	793	489
75°	254	335	439	514	534	269
85°	55	103	112	111	112	67
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1529.5	1529.5	1529.5	1529.5	1529.5
2.5°	1535.8	1524.7	1529.5	1529.5	1523.2
5°	1529.5	1520.0	1527.9	1527.9	1527.9
7.5°	1518.4	1510.5	1523.2	1526.3	1526.3
10°	1501.0	1497.9	1513.7	1518.4	1520.0
12.5°	1482.1	1480.5	1502.6	1508.9	1513.7
15°	1456.8	1460.0	1485.2	1496.3	1501.0
17.5°	1429.9	1436.3	1464.7	1480.5	1485.2
20°	1398.3	1407.8	1441.0	1456.8	1466.3
22.5°	1363.6	1377.8	1412.6	1431.5	1442.6
25°	1325.7	1343.0	1382.5	1406.2	1418.9
27.5°	1284.6	1306.7	1352.5	1379.4	1392.0
30°	1240.3	1265.6	1316.2	1347.8	1363.6
32.5°	1194.5	1224.5	1279.8	1314.6	1333.6
35°	1148.7	1181.9	1241.9	1283.0	1302.0
37.5°	1102.9	1136.1	1202.4	1246.7	1270.4
40°	1050.7	1090.2	1161.3	1210.3	1234.0
42.5°	1000.2	1042.8	1118.7	1172.4	1197.7
45°	944.9	995.4	1074.4	1134.5	1161.3
47.5°	894.3	944.9	1030.2	1093.4	1123.4
50°	839.0	892.7	982.8	1052.3	1083.9
52.5°	785.3	840.6	935.4	1009.7	1041.3
55°	726.8	790.0	886.4	963.8	997.0
57.5°	668.4	736.3	835.8	916.4	949.6
60°	611.5	681.0	785.3	865.9	900.6
62.5°	554.6	624.1	733.1	815.3	848.5
65°	494.6	567.2	676.3	760.0	793.2
67.5°	434.5	510.4	619.4	703.1	734.7
70°	371.3	451.9	560.9	643.1	674.7
72.5°	312.8	393.4	500.9	581.5	611.5
75°	254.4	335.0	439.3	513.5	534.1
77.5°	197.5	278.1	371.3	420.3	425.0
80°	143.8	219.6	295.5	309.7	308.1
82.5°	96.4	164.3	203.8	205.4	210.1
85°	55.3	102.7	112.2	110.6	112.2
87.5°	22.1	36.3	31.6	23.7	23.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)