

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: P388853

Luminaire Tested: **24CZ2-55HE-SQR-UNV-L935-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: P388853  
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-L935-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4517.9 lumens  
Efficiency: N/A  
Efficacy: 103.9 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

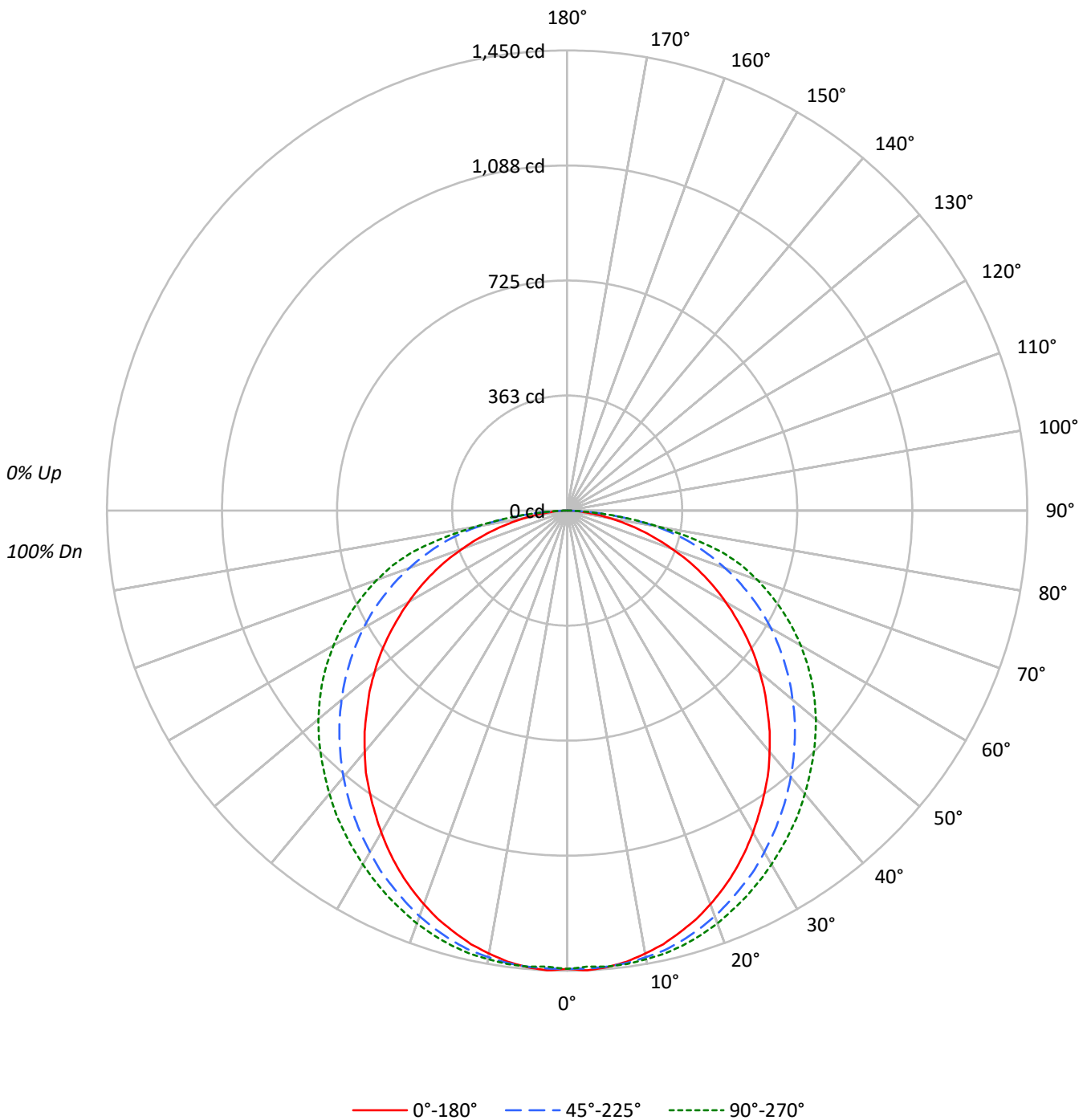
Input Watts (W): 43.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1943	1943	1943
5°	1950	1948	1948
10°	1936	1953	1961
15°	1916	1953	1974
20°	1890	1948	1982
25°	1858	1938	1989
30°	1819	1931	2000
35°	1781	1926	2019
40°	1743	1926	2047
45°	1697	1930	2086
50°	1658	1942	2142
55°	1610	1963	2208
60°	1554	1995	2288
65°	1487	2033	2384
70°	1379	2083	2506
75°	1249	2156	2622
80°	1052	2162	2254
85°	806	1635	1635



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	137.1	3.0
10°-20°	394.4	8.7
20°-30°	599.1	13.3
30°-40°	728.7	16.1
40°-50°	775.8	17.2
50°-60°	738.9	16.4
60°-70°	617.9	13.7
70°-80°	412.0	9.1
80°-90°	114.0	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°	1130.5	25.0
0°-40°	1859.2	41.2
0°-60°	3374.0	74.7
0°-90°	4517.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4517.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1444	1444	1444	1444	1444	
5°	1444	1435	1443	1443	1443	137
15°	1376	1378	1402	1413	1417	388
25°	1252	1268	1305	1328	1340	576
35°	1085	1116	1173	1211	1229	679
45°	892	940	1014	1071	1096	690
55°	686	746	837	910	941	614
65°	467	536	638	718	749	461
75°	240	316	415	485	504	254
85°	52	97	106	104	106	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1444.1	1444.1	1444.1	1444.1	1444.1
2.5°	1450.1	1439.7	1444.1	1444.1	1438.2
5°	1444.1	1435.2	1442.6	1442.6	1442.6
7.5°	1433.7	1426.2	1438.2	1441.2	1441.2
10°	1417.3	1414.3	1429.2	1433.7	1435.2
12.5°	1399.4	1397.9	1418.8	1424.7	1429.2
15°	1375.5	1378.5	1402.4	1412.8	1417.3
17.5°	1350.2	1356.1	1383.0	1397.9	1402.4
20°	1320.3	1329.3	1360.6	1375.5	1384.5
22.5°	1287.5	1300.9	1333.7	1351.6	1362.1
25°	1251.7	1268.1	1305.4	1327.8	1339.7
27.5°	1212.9	1233.8	1277.1	1302.4	1314.3
30°	1171.1	1195.0	1242.7	1272.6	1287.5
32.5°	1127.9	1156.2	1208.4	1241.2	1259.1
35°	1084.6	1115.9	1172.6	1211.4	1229.3
37.5°	1041.3	1072.7	1135.3	1177.1	1199.5
40°	992.1	1029.4	1096.5	1142.8	1165.2
42.5°	944.4	984.6	1056.3	1107.0	1130.8
45°	892.1	939.9	1014.5	1071.2	1096.5
47.5°	844.4	892.1	972.7	1032.4	1060.7
50°	792.2	842.9	927.9	993.6	1023.4
52.5°	741.5	793.7	883.2	953.3	983.1
55°	686.3	745.9	836.9	910.0	941.4
57.5°	631.1	695.2	789.2	865.3	896.6
60°	577.4	643.0	741.5	817.6	850.4
62.5°	523.7	589.3	692.2	769.8	801.1
65°	467.0	535.6	638.5	717.6	748.9
67.5°	410.3	481.9	584.8	663.9	693.7
70°	350.6	426.7	529.6	607.2	637.0
72.5°	295.4	371.5	472.9	549.0	577.4
75°	240.2	316.3	414.7	484.9	504.3
77.5°	186.5	262.6	350.6	396.8	401.3
80°	135.8	207.4	279.0	292.4	290.9
82.5°	91.0	155.2	192.5	193.9	198.4
85°	52.2	97.0	105.9	104.4	105.9
87.5°	20.9	34.3	29.8	22.4	22.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)