

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: P388856

Luminaire Tested: **24CZ2-55HE-SQR-UNV-L940-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: P388856  
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-L940-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4564.6 lumens  
Efficiency: N/A  
Efficacy: 104.9 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

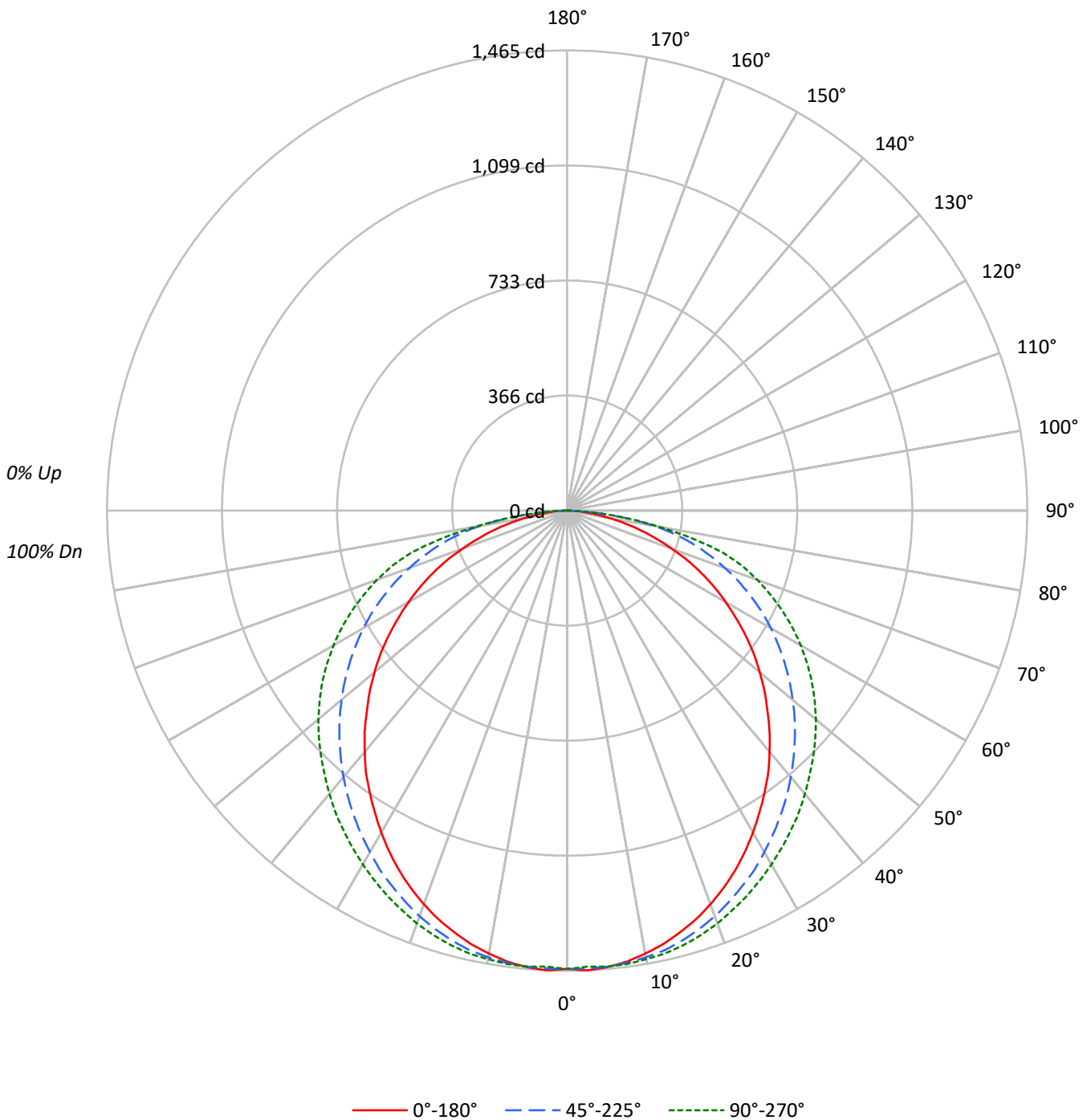
Input Watts (W): 43.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24

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

	0°	45°	90°
0°	1963	1963	1963
5°	1971	1969	1969
10°	1956	1973	1981
15°	1936	1974	1995
20°	1910	1968	2003
25°	1877	1958	2010
30°	1838	1951	2021
35°	1800	1946	2040
40°	1761	1946	2068
45°	1715	1950	2108
50°	1675	1962	2164
55°	1627	1984	2231
60°	1570	2016	2312
65°	1502	2054	2409
70°	1393	2105	2532
75°	1262	2178	2649
80°	1063	2184	2277
85°	815	1652	1652



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.5	3.0
10°-20°	398.5	8.7
20°-30°	605.3	13.3
30°-40°	736.2	16.1
40°-50°	783.8	17.2
50°-60°	746.6	16.4
60°-70°	624.3	13.7
70°-80°	416.2	9.1
80°-90°	115.2	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°	1142.2	25.0
0°-40°	1878.5	41.2
0°-60°	3408.9	74.7
0°-90°	4564.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4564.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1459	1459	1459	1459	1459	
5°	1459	1450	1458	1458	1458	138
15°	1390	1393	1417	1427	1432	392
25°	1265	1281	1319	1342	1354	582
35°	1096	1128	1185	1224	1242	686
45°	901	950	1025	1082	1108	697
55°	693	754	846	920	951	620
65°	472	541	645	725	757	466
75°	243	320	419	490	510	257
85°	53	98	107	106	107	64
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1459.1	1459.1	1459.1	1459.1	1459.1
2.5°	1465.1	1454.5	1459.1	1459.1	1453.0
5°	1459.1	1450.0	1457.6	1457.6	1457.6
7.5°	1448.5	1441.0	1453.0	1456.1	1456.1
10°	1431.9	1428.9	1444.0	1448.5	1450.0
12.5°	1413.8	1412.3	1433.4	1439.5	1444.0
15°	1389.7	1392.7	1416.9	1427.4	1431.9
17.5°	1364.1	1370.1	1397.3	1412.3	1416.9
20°	1334.0	1343.0	1374.7	1389.7	1398.8
22.5°	1300.8	1314.4	1347.5	1365.6	1376.2
25°	1264.6	1281.2	1318.9	1341.5	1353.6
27.5°	1225.4	1246.5	1290.3	1315.9	1327.9
30°	1183.2	1207.3	1255.6	1285.7	1300.8
32.5°	1139.5	1168.2	1220.9	1254.1	1272.2
35°	1095.8	1127.5	1184.7	1223.9	1242.0
37.5°	1052.1	1083.8	1147.1	1189.3	1211.9
40°	1002.4	1040.0	1107.9	1154.6	1177.2
42.5°	954.1	994.8	1067.2	1118.4	1142.5
45°	901.4	949.6	1025.0	1082.2	1107.9
47.5°	853.1	901.4	982.8	1043.1	1071.7
50°	800.4	851.6	937.5	1003.9	1034.0
52.5°	749.1	801.9	892.3	963.2	993.3
55°	693.4	753.7	845.6	919.5	951.1
57.5°	637.6	702.4	797.4	874.2	905.9
60°	583.3	649.6	749.1	826.0	859.2
62.5°	529.1	595.4	699.4	777.8	809.4
65°	471.8	541.1	645.1	725.0	756.7
67.5°	414.5	486.9	590.9	670.7	700.9
70°	354.2	431.1	535.1	613.5	643.6
72.5°	298.4	375.3	477.8	554.7	583.3
75°	242.7	319.5	419.0	489.9	509.5
77.5°	188.4	265.3	354.2	400.9	405.5
80°	137.2	209.5	281.9	295.4	293.9
82.5°	91.9	156.8	194.4	195.9	200.5
85°	52.8	98.0	107.0	105.5	107.0
87.5°	21.1	34.7	30.1	22.6	22.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)