

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: P388899

Luminaire Tested: **24CZ2-60-SQR-UNV-L935-CD1-SDWPD1-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: P388899
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: 24CZ2-60-SQR-UNV-L935-CD1-SDWPD1-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: 4786.7 lumens
Efficiency: N/A
Efficacy: 86.1 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

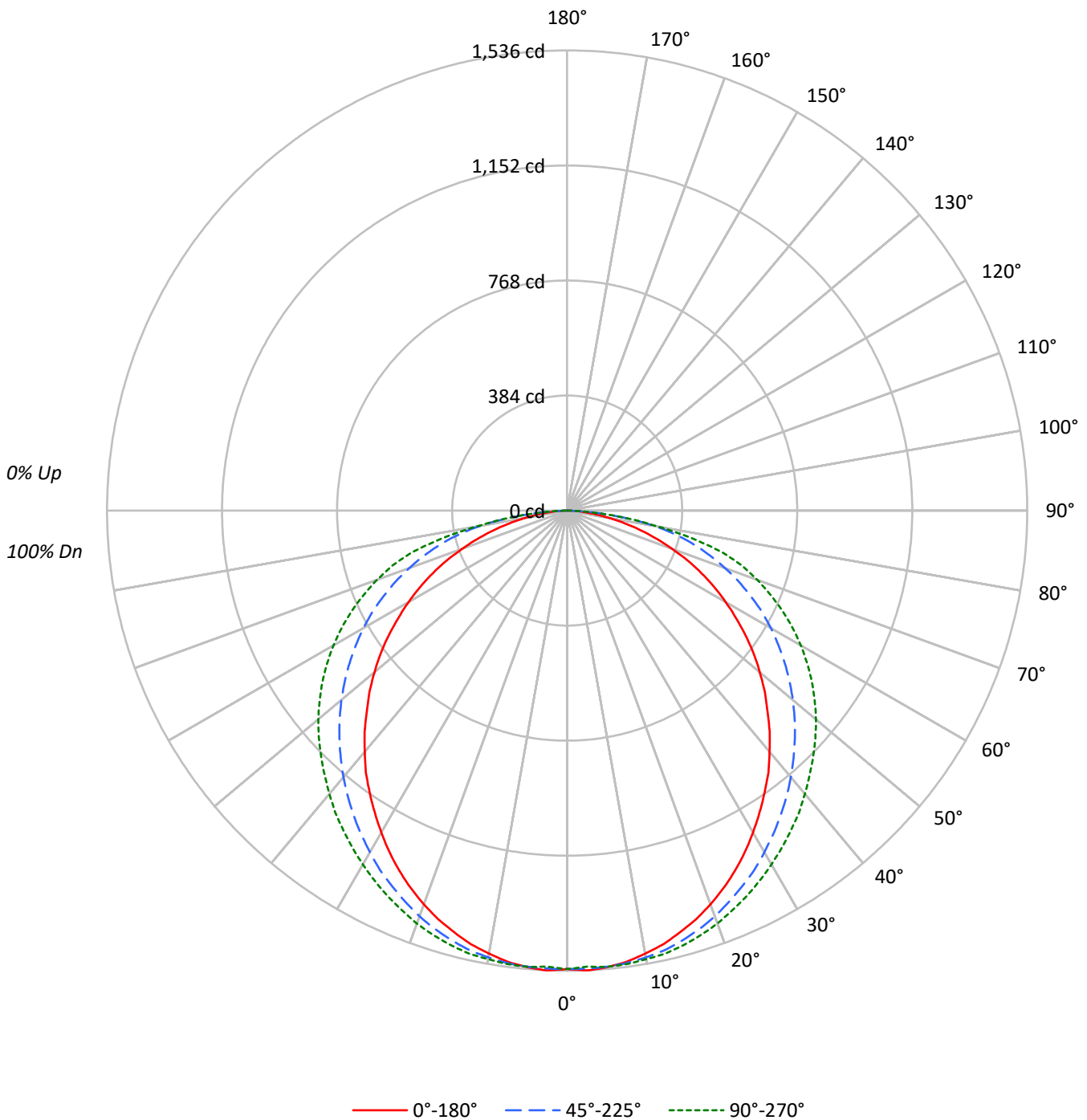
Input Watts (W): 55.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2059	2059	2059
5°	2067	2064	2064
10°	2052	2069	2078
15°	2030	2070	2092
20°	2003	2064	2100
25°	1969	2053	2107
30°	1928	2046	2119
35°	1887	2041	2139
40°	1846	2041	2168
45°	1799	2045	2211
50°	1757	2058	2270
55°	1706	2080	2340
60°	1646	2114	2425
65°	1575	2154	2526
70°	1461	2207	2655
75°	1323	2284	2778
80°	1114	2290	2388
85°	854	1732	1732



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.2	3.0
10°-20°	417.9	8.7
20°-30°	634.7	13.3
30°-40°	772.0	16.1
40°-50°	822.0	17.2
50°-60°	782.9	16.4
60°-70°	654.7	13.7
70°-80°	436.5	9.1
80°-90°	120.8	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°	1197.8	25.0
0°-40°	1969.9	41.2
0°-60°	3574.7	74.7
0°-90°	4786.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4786.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1530	1530	1530	1530	1530	
5°	1530	1521	1528	1528	1528	145
15°	1457	1460	1486	1497	1502	411
25°	1326	1344	1383	1407	1419	611
35°	1149	1182	1242	1284	1302	719
45°	945	996	1075	1135	1162	731
55°	727	790	887	964	997	650
65°	495	568	676	760	794	489
75°	254	335	439	514	534	270
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°	1530.1	1530.1	1530.1	1530.1	1530.1
2.5°	1536.4	1525.3	1530.1	1530.1	1523.7
5°	1530.1	1520.6	1528.5	1528.5	1528.5
7.5°	1519.0	1511.1	1523.7	1526.9	1526.9
10°	1501.6	1498.4	1514.3	1519.0	1520.6
12.5°	1482.6	1481.1	1503.2	1509.5	1514.3
15°	1457.4	1460.5	1485.8	1496.9	1501.6
17.5°	1430.5	1436.8	1465.3	1481.1	1485.8
20°	1398.9	1408.4	1441.5	1457.4	1466.8
22.5°	1364.1	1378.3	1413.1	1432.1	1443.1
25°	1326.2	1343.5	1383.1	1406.8	1419.4
27.5°	1285.1	1307.2	1353.0	1379.9	1392.5
30°	1240.8	1266.1	1316.7	1348.3	1364.1
32.5°	1195.0	1225.0	1280.3	1315.1	1334.1
35°	1149.1	1182.3	1242.4	1283.5	1302.4
37.5°	1103.3	1136.5	1202.9	1247.1	1270.8
40°	1051.1	1090.6	1161.8	1210.8	1234.5
42.5°	1000.5	1043.2	1119.1	1172.8	1198.1
45°	945.2	995.8	1074.8	1134.9	1161.8
47.5°	894.6	945.2	1030.6	1093.8	1123.8
50°	839.3	893.1	983.2	1052.7	1084.3
52.5°	785.6	840.9	935.7	1010.0	1041.6
55°	727.1	790.3	886.7	964.2	997.4
57.5°	668.6	736.6	836.2	916.8	950.0
60°	611.7	681.3	785.6	866.2	901.0
62.5°	554.8	624.4	733.4	815.6	848.8
65°	494.7	567.5	676.5	760.3	793.5
67.5°	434.7	510.5	619.6	703.4	735.0
70°	371.5	452.1	561.1	643.3	674.9
72.5°	313.0	393.6	501.1	581.7	611.7
75°	254.5	335.1	439.4	513.7	534.3
77.5°	197.6	278.2	371.5	420.5	425.2
80°	143.8	219.7	295.6	309.8	308.2
82.5°	96.4	164.4	203.9	205.5	210.2
85°	55.3	102.7	112.2	110.6	112.2
87.5°	22.1	36.4	31.6	23.7	23.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)