

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: P388924

Luminaire Tested: **24CZ2-60HE-SQR-UNV-L935-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: P388924
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: 24CZ2-60HE-SQR-UNV-L935-CD1-SWPD1-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: 4820.3 lumens
Efficiency: N/A
Efficacy: 109.3 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

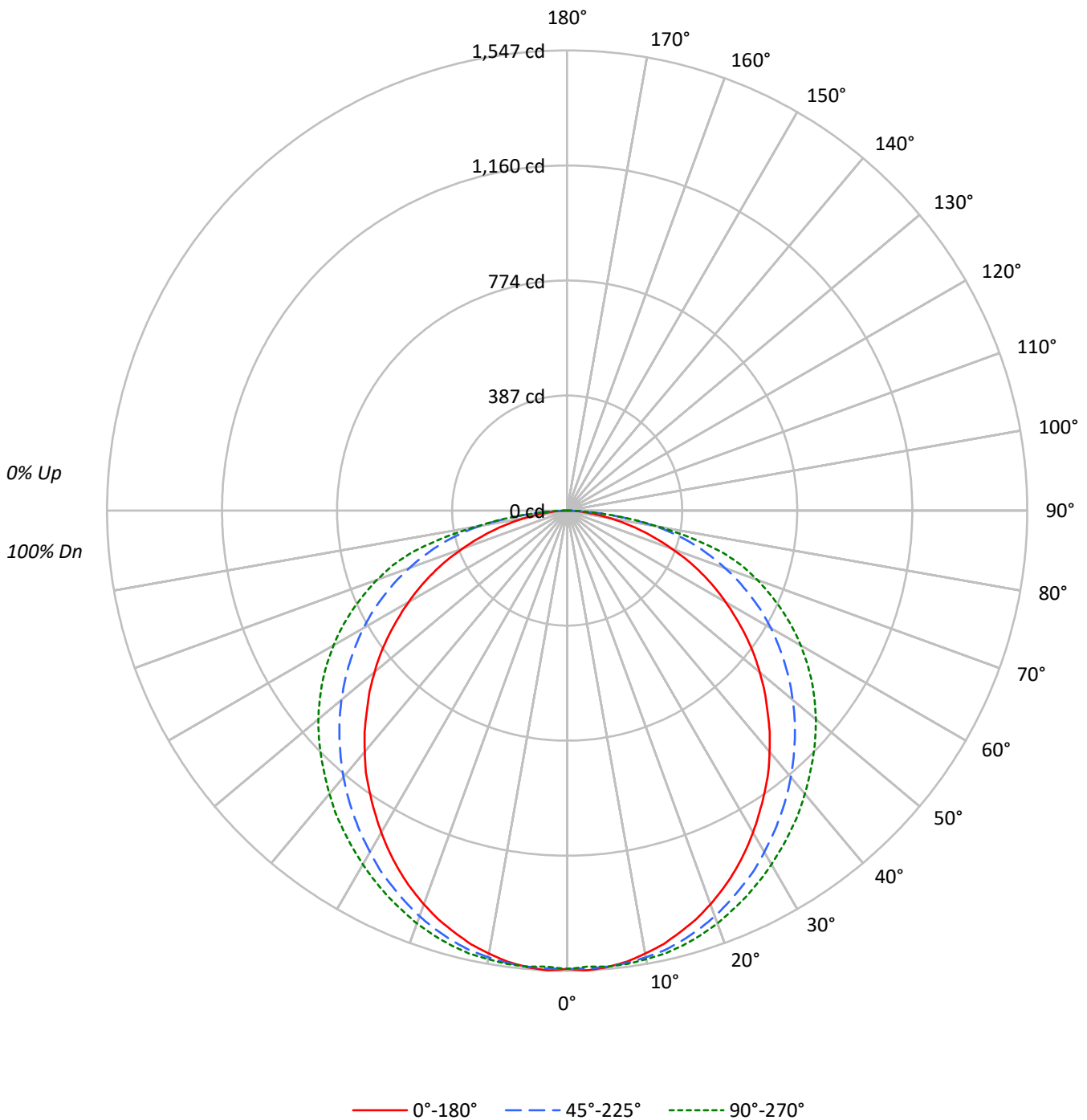
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
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°	2073	2073	2073
5°	2081	2079	2079
10°	2066	2083	2092
15°	2044	2084	2106
20°	2017	2079	2115
25°	1983	2068	2122
30°	1941	2060	2134
35°	1901	2055	2154
40°	1859	2055	2183
45°	1811	2060	2226
50°	1769	2072	2286
55°	1718	2095	2356
60°	1658	2129	2442
65°	1586	2169	2544
70°	1472	2223	2674
75°	1332	2300	2797
80°	1122	2307	2405
85°	860	1744	1744



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	146.3	3.0
10°-20°	420.8	8.7
20°-30°	639.2	13.3
30°-40°	777.5	16.1
40°-50°	827.7	17.2
50°-60°	788.4	16.4
60°-70°	659.3	13.7
70°-80°	439.6	9.1
80°-90°	121.6	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°	1206.2	25.0
0°-40°	1983.7	41.2
0°-60°	3599.8	74.7
0°-90°	4820.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4820.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1541	1541	1541	1541	1541	
5°	1541	1531	1539	1539	1539	146
15°	1468	1471	1496	1507	1512	414
25°	1336	1353	1393	1417	1429	615
35°	1157	1191	1251	1292	1312	724
45°	952	1003	1082	1143	1170	736
55°	732	796	893	971	1004	655
65°	498	571	681	766	799	492
75°	256	337	442	517	538	272
85°	56	104	113	111	113	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1540.8	1540.8	1540.8	1540.8	1540.8
2.5°	1547.2	1536.0	1540.8	1540.8	1534.4
5°	1540.8	1531.3	1539.2	1539.2	1539.2
7.5°	1529.7	1521.7	1534.4	1537.6	1537.6
10°	1512.2	1509.0	1524.9	1529.7	1531.3
12.5°	1493.1	1491.5	1513.7	1520.1	1524.9
15°	1467.6	1470.8	1496.2	1507.4	1512.2
17.5°	1440.5	1446.9	1475.5	1491.5	1496.2
20°	1408.7	1418.2	1451.7	1467.6	1477.1
22.5°	1373.7	1388.0	1423.0	1442.1	1453.3
25°	1335.5	1353.0	1392.8	1416.6	1429.4
27.5°	1294.1	1316.4	1362.5	1389.6	1402.3
30°	1249.5	1275.0	1325.9	1357.8	1373.7
32.5°	1203.4	1233.6	1289.3	1324.3	1343.4
35°	1157.2	1190.6	1251.1	1292.5	1311.6
37.5°	1111.0	1144.5	1211.3	1255.9	1279.8
40°	1058.5	1098.3	1169.9	1219.3	1243.1
42.5°	1007.6	1050.5	1127.0	1181.1	1206.5
45°	951.9	1002.8	1082.4	1142.9	1169.9
47.5°	900.9	951.9	1037.8	1101.5	1131.7
50°	845.2	899.3	990.1	1060.1	1091.9
52.5°	791.1	846.8	942.3	1017.1	1049.0
55°	732.2	795.9	893.0	971.0	1004.4
57.5°	673.3	741.7	842.0	923.2	956.6
60°	616.0	686.0	791.1	872.3	907.3
62.5°	558.7	628.7	738.6	821.3	854.8
65°	498.2	571.4	681.3	765.6	799.1
67.5°	437.7	514.1	624.0	708.3	740.2
70°	374.1	455.2	565.1	647.8	679.7
72.5°	315.2	396.3	504.6	585.8	616.0
75°	256.3	337.4	442.5	517.3	538.0
77.5°	199.0	280.1	374.1	423.4	428.2
80°	144.8	221.3	297.7	312.0	310.4
82.5°	97.1	165.5	205.3	206.9	211.7
85°	55.7	103.5	113.0	111.4	113.0
87.5°	22.3	36.6	31.8	23.9	23.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)