

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: P345104

Luminaire Tested: **24CZ-60SE-L840-HRP-UNV-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P345104
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1905-313-5)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-60SE-L840-HRP-UNV-CD1-U
Description: CRUZE 2X4 WITH HRP LENS INSERT
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5160.9 lumens
Efficiency: N/A
Efficacy: 86.0 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.29 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

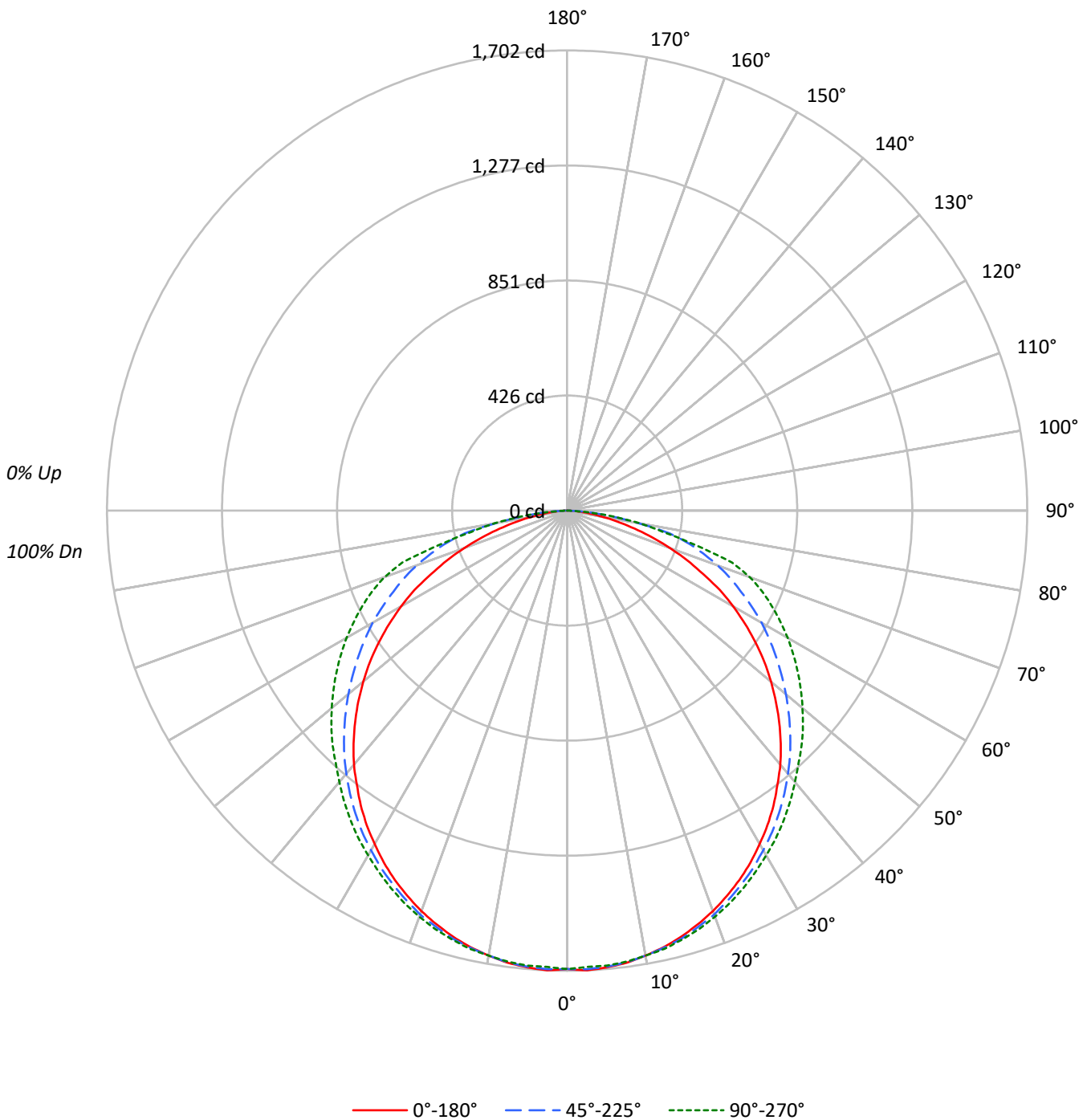
Input Watts (W): 60
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P345104

CATALOG NUMBER: 24CZ-60SE-L840-HRP-UNV-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P345104

CATALOG NUMBER: 24CZ-60SE-L840-HRP-UNV-CD1-U

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	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					100			
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83					83			
2	98	89	82	76	95	87	81	75	84	78	74	81	76	72	77	74	70	68					68			
3	89	78	70	63	86	76	69	62	73	67	61	71	65	60	68	63	59	57					57			
4	81	69	60	53	79	68	59	52	65	58	52	63	56	51	60	55	50	48					48			
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	43	41					41			
6	69	55	46	39	67	54	45	39	52	45	39	51	44	38	49	43	38	36					36			
7	64	50	41	35	62	49	41	34	48	40	34	46	39	34	45	38	34	32					32			
8	59	45	37	31	58	45	36	31	43	36	31	42	35	30	41	35	30	28					28			
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25					25			
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23					23			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2282	2282	2282
5°	2290	2287	2281
10°	2283	2283	2283
15°	2273	2282	2288
20°	2257	2276	2289
25°	2238	2265	2288
30°	2212	2253	2288
35°	2186	2244	2295
40°	2155	2233	2303
45°	2112	2221	2335
50°	2059	2212	2379
55°	1997	2214	2443
60°	1910	2237	2534
65°	1767	2259	2661
70°	1592	2331	2827
75°	1345	2402	2529
80°	1045	2056	2124
85°	750	1399	1229



TEST NUMBER: P345104

CATALOG NUMBER: 24CZ-60SE-L840-HRP-UNV-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.7	3.1
10°-20°	461.5	8.9
20°-30°	701.9	13.6
30°-40°	852.7	16.5
40°-50°	900.0	17.4
50°-60°	845.7	16.4
60°-70°	696.2	13.5
70°-80°	438.6	8.5
80°-90°	103.6	2.0
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°	1324.1	25.7
0°-40°	2176.8	42.2
0°-60°	3922.5	76.0
0°-90°	5160.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5160.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1696	1696	1696	1696	1696	
5°	1696	1687	1693	1691	1689	161
15°	1632	1625	1638	1643	1643	460
25°	1508	1506	1525	1534	1541	694
35°	1331	1338	1366	1384	1397	832
45°	1110	1128	1167	1200	1227	856
55°	851	882	944	1010	1041	760
65°	555	608	710	800	836	551
75°	259	338	462	504	486	276
85°	49	82	91	84	80	61
90°	0	0	0	0	0	



TEST NUMBER: P345104

CATALOG NUMBER: 24CZ-60SE-L840-HRP-UNV-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1695.7	1695.7	1695.7	1695.7	1695.7
2.5°	1702.3	1691.2	1697.9	1695.7	1689.0
5°	1695.7	1686.8	1693.4	1691.2	1689.0
7.5°	1686.8	1678.0	1684.6	1682.4	1682.4
10°	1671.3	1664.7	1671.3	1671.3	1671.3
12.5°	1653.6	1647.0	1655.9	1658.1	1660.3
15°	1631.5	1624.9	1638.2	1642.6	1642.6
17.5°	1605.0	1600.6	1613.9	1618.3	1622.7
20°	1576.3	1574.1	1589.5	1594.0	1598.4
22.5°	1543.1	1543.1	1558.6	1563.0	1571.8
25°	1507.7	1505.5	1525.4	1534.3	1540.9
27.5°	1467.9	1467.9	1490.1	1501.1	1507.7
30°	1423.7	1428.1	1450.3	1463.5	1472.4
32.5°	1379.5	1383.9	1410.5	1425.9	1437.0
35°	1330.9	1337.5	1366.2	1383.9	1397.2
37.5°	1277.8	1288.9	1319.8	1339.7	1355.2
40°	1227.0	1235.8	1271.2	1293.3	1311.0
42.5°	1169.5	1185.0	1220.3	1246.9	1266.8
45°	1109.8	1127.5	1167.3	1200.4	1227.0
47.5°	1047.9	1070.0	1112.0	1156.2	1182.8
50°	983.8	1008.1	1056.7	1109.8	1136.3
52.5°	919.7	946.2	999.3	1061.2	1089.9
55°	851.1	882.1	944.0	1010.3	1041.3
57.5°	780.4	815.8	886.5	961.7	992.6
60°	709.7	747.2	831.2	906.4	941.8
62.5°	636.7	678.7	769.3	855.6	888.7
65°	554.9	608.0	709.7	800.3	835.7
67.5°	479.7	535.0	652.2	742.8	780.4
70°	404.6	468.7	592.5	683.1	718.5
72.5°	329.4	404.6	526.2	619.0	638.9
75°	258.7	338.2	462.0	504.1	486.4
77.5°	190.1	278.6	389.1	367.0	362.6
80°	134.9	221.1	265.3	267.5	274.1
82.5°	86.2	163.6	172.4	174.6	176.9
85°	48.6	81.8	90.6	84.0	79.6
87.5°	22.1	26.5	22.1	15.5	13.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)