

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: P295064

Luminaire Tested: **24CZ2-60-HRP-UNV-L935-CD1-U**

Issue Date: 12/2/2019

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: P295064  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-60-HRP-UNV-L935-CD1-U  
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS  
Light Source: (112) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

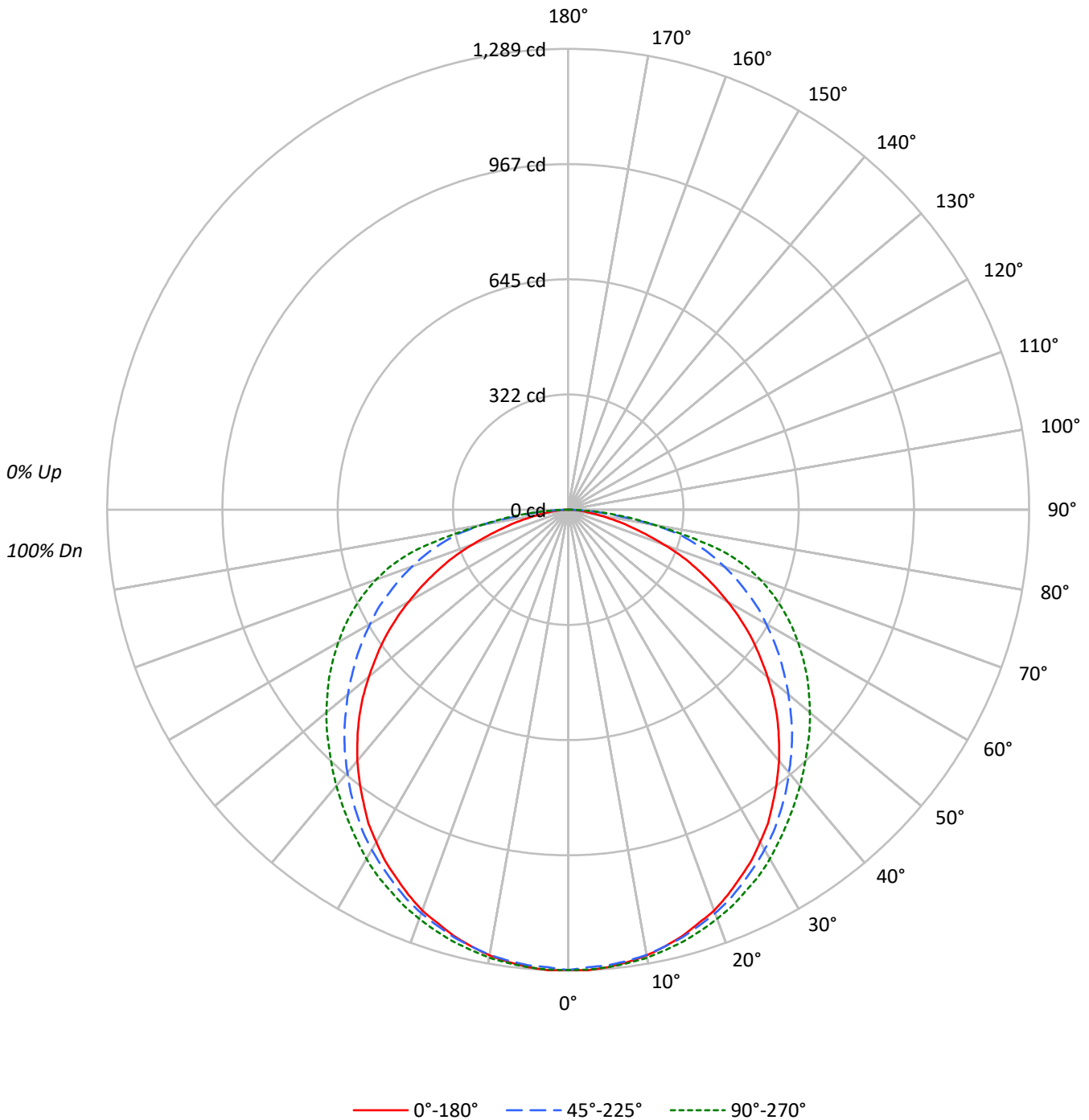
Lumens per Lamp: N/A  
Luminaire Lumens: 3968.4 lumens  
Efficiency: N/A  
Efficacy: 71.4 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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



TEST NUMBER: P295064  
CATALOG NUMBER: 24CZ2-60-HRP-UNV-L935-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P295064

CATALOG NUMBER: 24CZ2-60-HRP-UNV-L935-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	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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

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

	0°	45°	90°
0°	1732	1732	1732
5°	1734	1728	1734
10°	1730	1727	1739
15°	1719	1724	1740
20°	1708	1720	1744
25°	1687	1712	1746
30°	1667	1706	1753
35°	1640	1697	1755
40°	1611	1687	1771
45°	1574	1685	1799
50°	1523	1683	1847
55°	1469	1695	1913
60°	1386	1721	1998
65°	1280	1761	2110
70°	1118	1823	2248
75°	907	1917	2323
80°	669	1880	1880
85°	513	1385	1564



TEST NUMBER: P295064

CATALOG NUMBER: 24CZ2-60-HRP-UNV-L935-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	122.0	3.1
10°-20°	350.3	8.8
20°-30°	533.2	13.4
30°-40°	647.5	16.3
40°-50°	684.0	17.2
50°-60°	645.5	16.3
60°-70°	536.7	13.5
70°-80°	353.1	8.9
80°-90°	96.2	2.4
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°	1005.5	25.3
0°-40°	1652.9	41.7
0°-60°	2982.4	75.2
0°-90°	3968.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3968.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1288	1288	1288	1288	1288	
5°	1284	1284	1279	1284	1284	122
15°	1234	1236	1238	1249	1249	348
25°	1136	1143	1153	1173	1176	524
35°	998	1010	1033	1060	1068	625
45°	827	844	886	929	945	637
55°	626	653	723	791	816	558
65°	402	449	553	635	663	397
75°	174	254	369	437	447	188
85°	33	73	90	100	101	41
90°	0	0	0	0	0	



TEST NUMBER: P295064

CATALOG NUMBER: 24CZ2-60-HRP-UNV-L935-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1287.6	1287.6	1287.6	1287.6	1287.6
2.5°	1289.2	1287.6	1280.9	1287.6	1287.6
5°	1284.2	1284.2	1279.2	1284.2	1284.2
7.5°	1275.9	1275.9	1272.6	1279.2	1279.2
10°	1266.0	1266.0	1264.3	1272.6	1272.6
12.5°	1251.0	1252.7	1251.0	1261.0	1261.0
15°	1234.4	1236.1	1237.7	1249.3	1249.3
17.5°	1212.8	1216.1	1219.4	1232.7	1234.4
20°	1192.9	1194.5	1201.2	1216.1	1217.8
22.5°	1166.3	1171.3	1179.6	1194.5	1199.5
25°	1136.4	1143.0	1153.0	1172.9	1176.2
27.5°	1108.1	1113.1	1126.4	1148.0	1154.6
30°	1073.2	1081.5	1098.2	1119.8	1128.1
32.5°	1040.0	1048.3	1068.3	1091.5	1098.2
35°	998.5	1010.1	1033.4	1059.9	1068.3
37.5°	958.6	970.2	998.5	1028.4	1038.3
40°	917.1	930.4	960.3	995.2	1008.4
42.5°	872.2	890.5	923.7	961.9	976.9
45°	827.4	844.0	885.5	928.7	945.3
47.5°	779.2	799.1	844.0	895.5	915.4
50°	727.7	752.6	804.1	860.6	882.2
52.5°	676.2	704.4	762.6	825.7	849.0
55°	626.3	652.9	722.7	790.8	815.7
57.5°	571.5	604.7	681.2	754.3	779.2
60°	515.0	551.6	639.6	716.0	742.6
62.5°	458.5	500.1	599.8	676.2	704.4
65°	402.0	448.6	553.2	634.6	662.9
67.5°	347.2	398.7	510.0	591.4	619.7
70°	284.1	348.9	463.5	543.3	571.5
72.5°	225.9	300.7	418.7	493.4	518.3
75°	174.4	254.2	368.8	436.9	446.9
77.5°	127.9	207.7	317.3	340.6	342.2
80°	86.4	166.1	242.6	239.2	242.6
82.5°	56.5	124.6	152.8	171.1	172.8
85°	33.2	73.1	89.7	99.7	101.3
87.5°	16.6	24.9	31.6	33.2	36.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)