

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: P295065

Luminaire Tested: **24CZ2-60-HRP-UNV-L940-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: P295065
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-L940-CD1-U
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (112) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

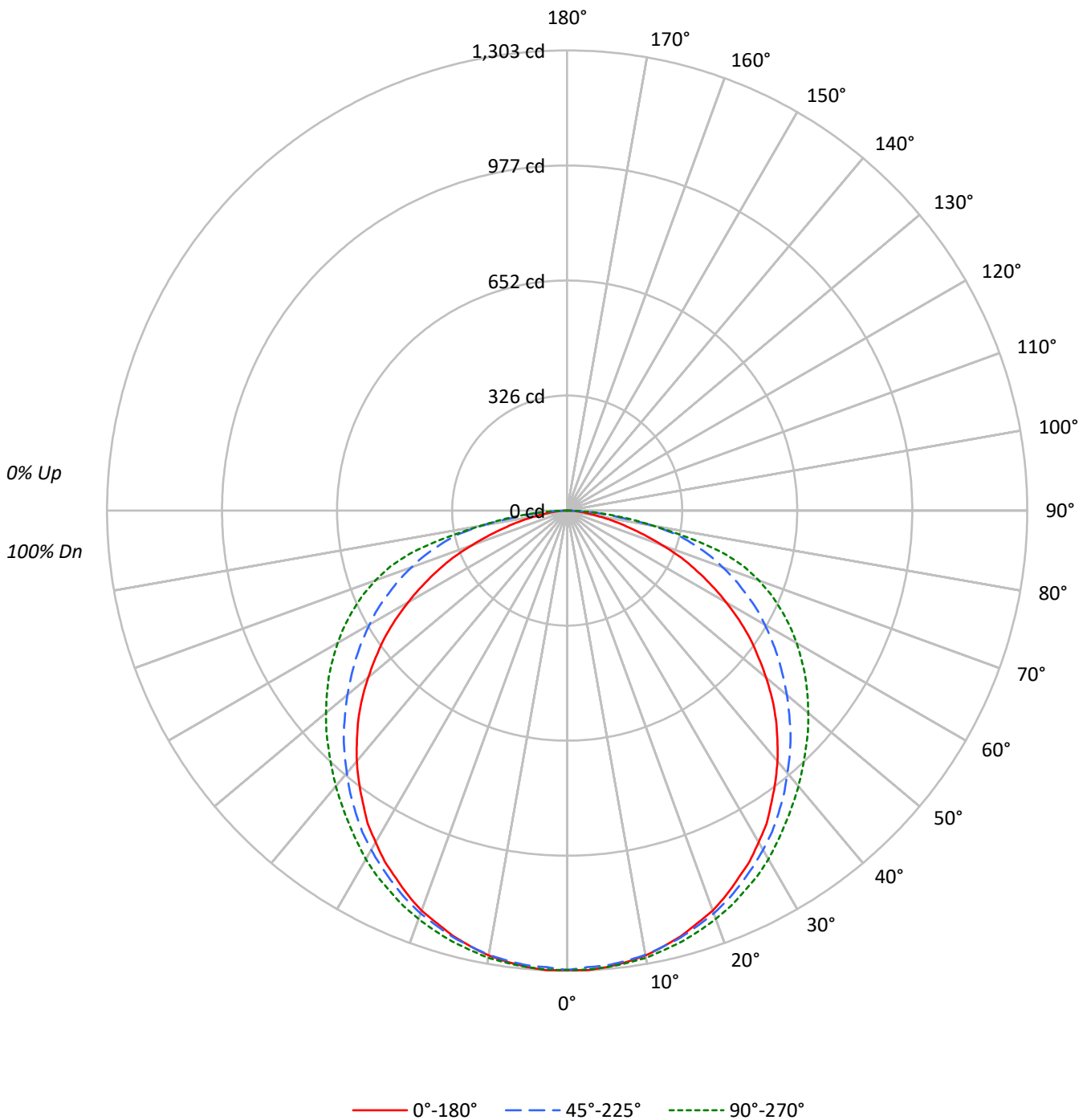
Lumens per Lamp: N/A
Luminaire Lumens: 4009.5 lumens
Efficiency: N/A
Efficacy: 72.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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: P295065
CATALOG NUMBER: 24CZ2-60-HRP-UNV-L940-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P295065

CATALOG NUMBER: 24CZ2-60-HRP-UNV-L940-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°	1750	1750	1750
5°	1752	1746	1752
10°	1748	1745	1757
15°	1737	1742	1758
20°	1726	1738	1762
25°	1704	1729	1764
30°	1685	1724	1771
35°	1657	1715	1773
40°	1627	1704	1790
45°	1591	1702	1817
50°	1539	1701	1866
55°	1484	1713	1933
60°	1400	1739	2019
65°	1293	1780	2132
70°	1129	1842	2271
75°	916	1937	2347
80°	676	1899	1899
85°	519	1399	1581



TEST NUMBER: P295065

CATALOG NUMBER: 24CZ2-60-HRP-UNV-L940-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.2	3.1
10°-20°	353.9	8.8
20°-30°	538.7	13.4
30°-40°	654.2	16.3
40°-50°	691.1	17.2
50°-60°	652.1	16.3
60°-70°	542.2	13.5
70°-80°	356.7	8.9
80°-90°	97.2	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°	1015.9	25.3
0°-40°	1670.0	41.7
0°-60°	3013.3	75.2
0°-90°	4009.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4009.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1301	1301	1301	1301	1301	
5°	1298	1298	1292	1298	1298	123
15°	1247	1249	1250	1262	1262	352
25°	1148	1155	1165	1185	1188	530
35°	1009	1021	1044	1071	1079	632
45°	836	853	895	938	955	644
55°	633	660	730	799	824	564
65°	406	453	559	641	670	402
75°	176	257	373	442	452	190
85°	34	74	91	101	102	41
90°	0	0	0	0	0	



TEST NUMBER: P295065

CATALOG NUMBER: 24CZ2-60-HRP-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1300.9	1300.9	1300.9	1300.9	1300.9
2.5°	1302.6	1300.9	1294.2	1300.9	1300.9
5°	1297.5	1297.5	1292.5	1297.5	1297.5
7.5°	1289.1	1289.1	1285.8	1292.5	1292.5
10°	1279.1	1279.1	1277.4	1285.8	1285.8
12.5°	1263.9	1265.6	1263.9	1274.0	1274.0
15°	1247.2	1248.8	1250.5	1262.3	1262.3
17.5°	1225.3	1228.7	1232.1	1245.5	1247.2
20°	1205.2	1206.9	1213.6	1228.7	1230.4
22.5°	1178.3	1183.4	1191.8	1206.9	1211.9
25°	1148.1	1154.8	1164.9	1185.1	1188.4
27.5°	1119.6	1124.6	1138.1	1159.9	1166.6
30°	1084.3	1092.7	1109.5	1131.3	1139.7
32.5°	1050.8	1059.2	1079.3	1102.8	1109.5
35°	1008.8	1020.6	1044.1	1070.9	1079.3
37.5°	968.5	980.3	1008.8	1039.0	1049.1
40°	926.6	940.0	970.2	1005.4	1018.9
42.5°	881.2	899.7	933.3	971.9	987.0
45°	835.9	852.7	894.7	938.3	955.1
47.5°	787.2	807.4	852.7	904.7	924.9
50°	735.2	760.4	812.4	869.5	891.3
52.5°	683.2	711.7	770.5	834.2	857.7
55°	632.8	659.7	730.2	799.0	824.2
57.5°	577.4	611.0	688.2	762.1	787.2
60°	520.3	557.3	646.2	723.5	750.3
62.5°	463.3	505.2	606.0	683.2	711.7
65°	406.2	453.2	559.0	641.2	669.7
67.5°	350.8	402.9	515.3	597.6	626.1
70°	287.0	352.5	468.3	548.9	577.4
72.5°	228.3	303.8	423.0	498.5	523.7
75°	176.2	256.8	372.6	441.5	451.5
77.5°	129.2	209.8	320.6	344.1	345.8
80°	87.3	167.9	245.1	241.7	245.1
82.5°	57.1	125.9	154.4	172.9	174.6
85°	33.6	73.9	90.6	100.7	102.4
87.5°	16.8	25.2	31.9	33.6	36.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)