

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: P295071

Luminaire Tested: **24CZ2-65-HRP-UNV-L930-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: P295071  
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: 24CZ2-65-HRP-UNV-L930-CD1-U  
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS  
Light Source: (112) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

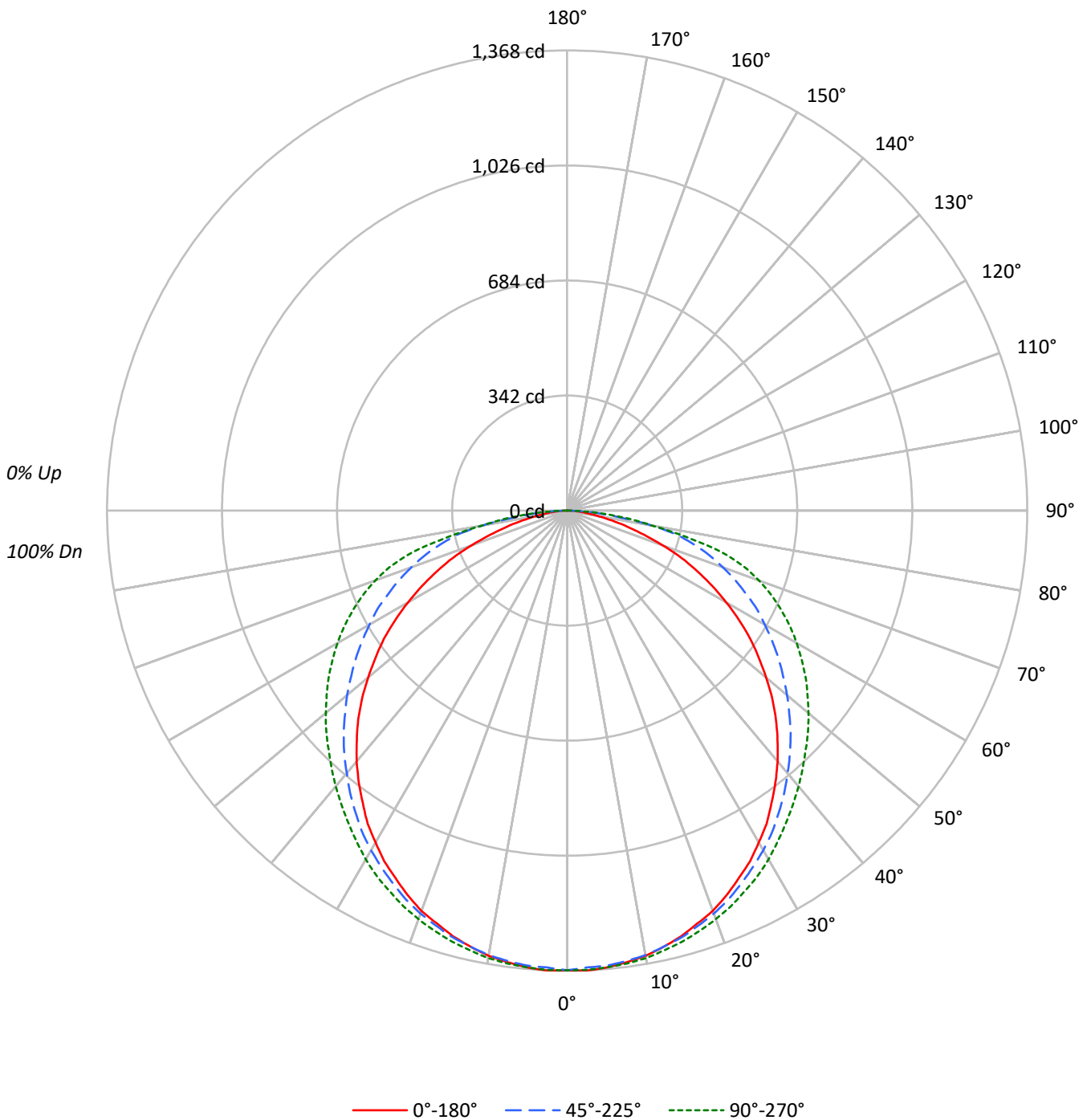
Lumens per Lamp: N/A  
Luminaire Lumens: 4212.4 lumens  
Efficiency: N/A  
Efficacy: 67.1 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 62.8  
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	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°	1839	1839	1839
5°	1841	1834	1841
10°	1836	1834	1846
15°	1825	1830	1847
20°	1813	1826	1851
25°	1791	1817	1854
30°	1770	1811	1860
35°	1741	1802	1862
40°	1710	1790	1880
45°	1671	1788	1909
50°	1617	1787	1960
55°	1559	1799	2031
60°	1471	1827	2121
65°	1359	1869	2240
70°	1186	1936	2386
75°	963	2035	2466
80°	711	1995	1995
85°	545	1470	1661



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.5	3.1
10°-20°	371.8	8.8
20°-30°	566.0	13.4
30°-40°	687.3	16.3
40°-50°	726.1	17.2
50°-60°	685.1	16.3
60°-70°	569.7	13.5
70°-80°	374.8	8.9
80°-90°	102.2	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°	1067.3	25.3
0°-40°	1754.5	41.7
0°-60°	3165.7	75.2
0°-90°	4212.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4212.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1367	1367	1367	1367	1367	
5°	1363	1363	1358	1363	1363	129
15°	1310	1312	1314	1326	1326	370
25°	1206	1213	1224	1245	1249	556
35°	1060	1072	1097	1125	1134	663
45°	878	896	940	986	1003	676
55°	665	693	767	839	866	592
65°	427	476	587	674	704	422
75°	185	270	392	464	474	200
85°	35	78	95	106	108	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1366.7	1366.7	1366.7	1366.7	1366.7
2.5°	1368.5	1366.7	1359.7	1366.7	1366.7
5°	1363.2	1363.2	1357.9	1363.2	1363.2
7.5°	1354.4	1354.4	1350.8	1357.9	1357.9
10°	1343.8	1343.8	1342.0	1350.8	1350.8
12.5°	1327.9	1329.7	1327.9	1338.5	1338.5
15°	1310.3	1312.0	1313.8	1326.1	1326.1
17.5°	1287.3	1290.9	1294.4	1308.5	1310.3
20°	1266.2	1268.0	1275.0	1290.9	1292.6
22.5°	1238.0	1243.3	1252.1	1268.0	1273.2
25°	1206.2	1213.3	1223.9	1245.0	1248.6
27.5°	1176.2	1181.5	1195.6	1218.6	1225.6
30°	1139.2	1148.0	1165.7	1188.6	1197.4
32.5°	1103.9	1112.8	1133.9	1158.6	1165.7
35°	1059.9	1072.2	1096.9	1125.1	1133.9
37.5°	1017.5	1029.9	1059.9	1091.6	1102.2
40°	973.4	987.6	1019.3	1056.3	1070.4
42.5°	925.8	945.2	980.5	1021.1	1036.9
45°	878.2	895.9	939.9	985.8	1003.4
47.5°	827.1	848.2	895.9	950.5	971.7
50°	772.4	798.9	853.5	913.5	936.4
52.5°	717.7	747.7	809.4	876.5	901.1
55°	664.8	693.1	767.1	839.4	865.9
57.5°	606.6	641.9	723.0	800.6	827.1
60°	546.7	585.5	678.9	760.1	788.3
62.5°	486.7	530.8	636.6	717.7	747.7
65°	426.8	476.1	587.2	673.7	703.6
67.5°	368.6	423.2	541.4	627.8	657.8
70°	301.6	370.3	492.0	576.7	606.6
72.5°	239.8	319.2	444.4	523.8	550.2
75°	185.2	269.8	391.5	463.8	474.4
77.5°	135.8	220.4	336.8	361.5	363.3
80°	91.7	176.3	257.5	253.9	257.5
82.5°	60.0	132.3	162.2	181.6	183.4
85°	35.3	77.6	95.2	105.8	107.6
87.5°	17.6	26.5	33.5	35.3	38.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)