

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: P295074

Luminaire Tested: **24CZ2-65-HRP-UNV-L950-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: P295074  
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-L950-CD1-U  
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS  
Light Source: (112) 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4629.2 lumens  
Efficiency: N/A  
Efficacy: 73.7 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

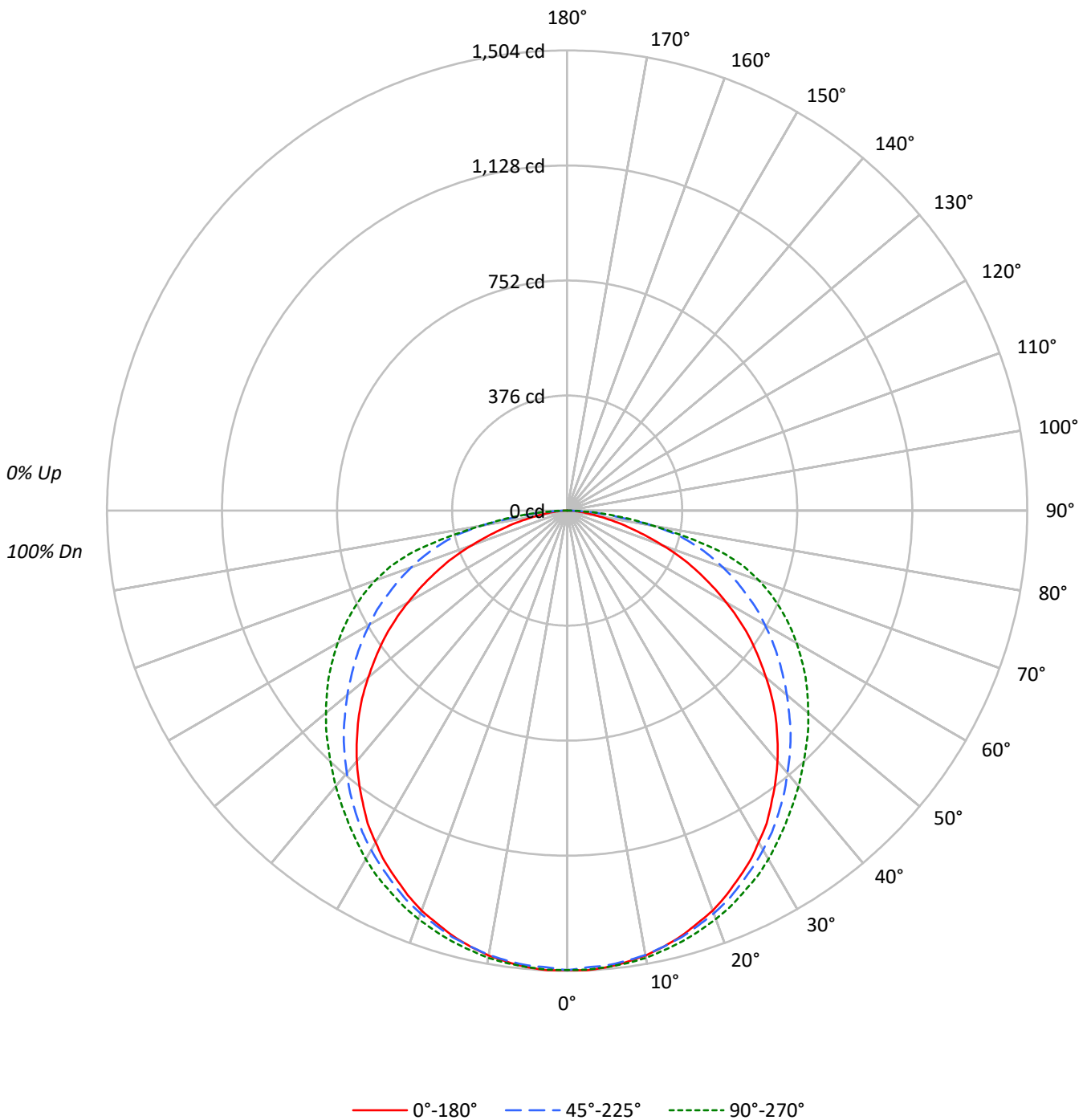
Input Watts (W): 62.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2021	2021	2021
5°	2023	2015	2023
10°	2018	2015	2028
15°	2006	2011	2030
20°	1992	2006	2034
25°	1968	1997	2037
30°	1945	1990	2044
35°	1913	1980	2047
40°	1879	1967	2066
45°	1836	1965	2098
50°	1777	1963	2154
55°	1714	1978	2232
60°	1617	2008	2331
65°	1493	2054	2462
70°	1304	2127	2623
75°	1058	2236	2710
80°	781	2192	2192
85°	599	1616	1825



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	142.3	3.1
10°-20°	408.6	8.8
20°-30°	622.0	13.4
30°-40°	755.3	16.3
40°-50°	797.9	17.2
50°-60°	752.9	16.3
60°-70°	626.0	13.5
70°-80°	411.9	8.9
80°-90°	112.3	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°	1172.9	25.3
0°-40°	1928.1	41.7
0°-60°	3479.0	75.2
0°-90°	4629.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4629.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1502	1502	1502	1502	1502	
5°	1498	1498	1492	1498	1498	142
15°	1440	1442	1444	1457	1457	406
25°	1326	1333	1345	1368	1372	611
35°	1165	1178	1205	1236	1246	729
45°	965	984	1033	1083	1103	743
55°	731	762	843	922	952	651
65°	469	523	645	740	773	464
75°	204	296	430	510	521	219
85°	39	85	105	116	118	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1501.9	1501.9	1501.9	1501.9	1501.9
2.5°	1503.9	1501.9	1494.2	1501.9	1501.9
5°	1498.1	1498.1	1492.2	1498.1	1498.1
7.5°	1488.4	1488.4	1484.5	1492.2	1492.2
10°	1476.7	1476.7	1474.8	1484.5	1484.5
12.5°	1459.3	1461.2	1459.3	1470.9	1470.9
15°	1439.9	1441.9	1443.8	1457.4	1457.4
17.5°	1414.7	1418.6	1422.5	1438.0	1439.9
20°	1391.5	1393.4	1401.2	1418.6	1420.5
22.5°	1360.5	1366.3	1376.0	1393.4	1399.2
25°	1325.6	1333.3	1345.0	1368.2	1372.1
27.5°	1292.6	1298.4	1313.9	1339.1	1346.9
30°	1251.9	1261.6	1281.0	1306.2	1315.9
32.5°	1213.2	1222.9	1246.1	1273.2	1281.0
35°	1164.7	1178.3	1205.4	1236.4	1246.1
37.5°	1118.2	1131.8	1164.7	1199.6	1211.2
40°	1069.8	1085.3	1120.1	1160.8	1176.3
42.5°	1017.4	1038.8	1077.5	1122.1	1139.5
45°	965.1	984.5	1032.9	1083.3	1102.7
47.5°	908.9	932.2	984.5	1044.6	1067.8
50°	848.8	877.9	938.0	1003.9	1029.1
52.5°	788.8	821.7	889.5	963.2	990.3
55°	730.6	761.6	843.0	922.5	951.5
57.5°	666.7	705.4	794.6	879.8	908.9
60°	600.8	643.4	746.1	835.3	866.3
62.5°	534.9	583.3	699.6	788.8	821.7
65°	469.0	523.3	645.3	740.3	773.3
67.5°	405.0	465.1	595.0	689.9	722.9
70°	331.4	407.0	540.7	633.7	666.7
72.5°	263.6	350.8	488.4	575.6	604.6
75°	203.5	296.5	430.2	509.7	521.3
77.5°	149.2	242.2	370.2	397.3	399.2
80°	100.8	193.8	282.9	279.1	282.9
82.5°	65.9	145.3	178.3	199.6	201.5
85°	38.8	85.3	104.7	116.3	118.2
87.5°	19.4	29.1	36.8	38.8	42.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)