

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: P295068

Luminaire Tested: **24CZ2-65HE-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: P295068
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: 24CZ2-65HE-HRP-UNV-L935-CD1-U
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (392) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4328.5 lumens
Efficiency: N/A
Efficacy: 88.5 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

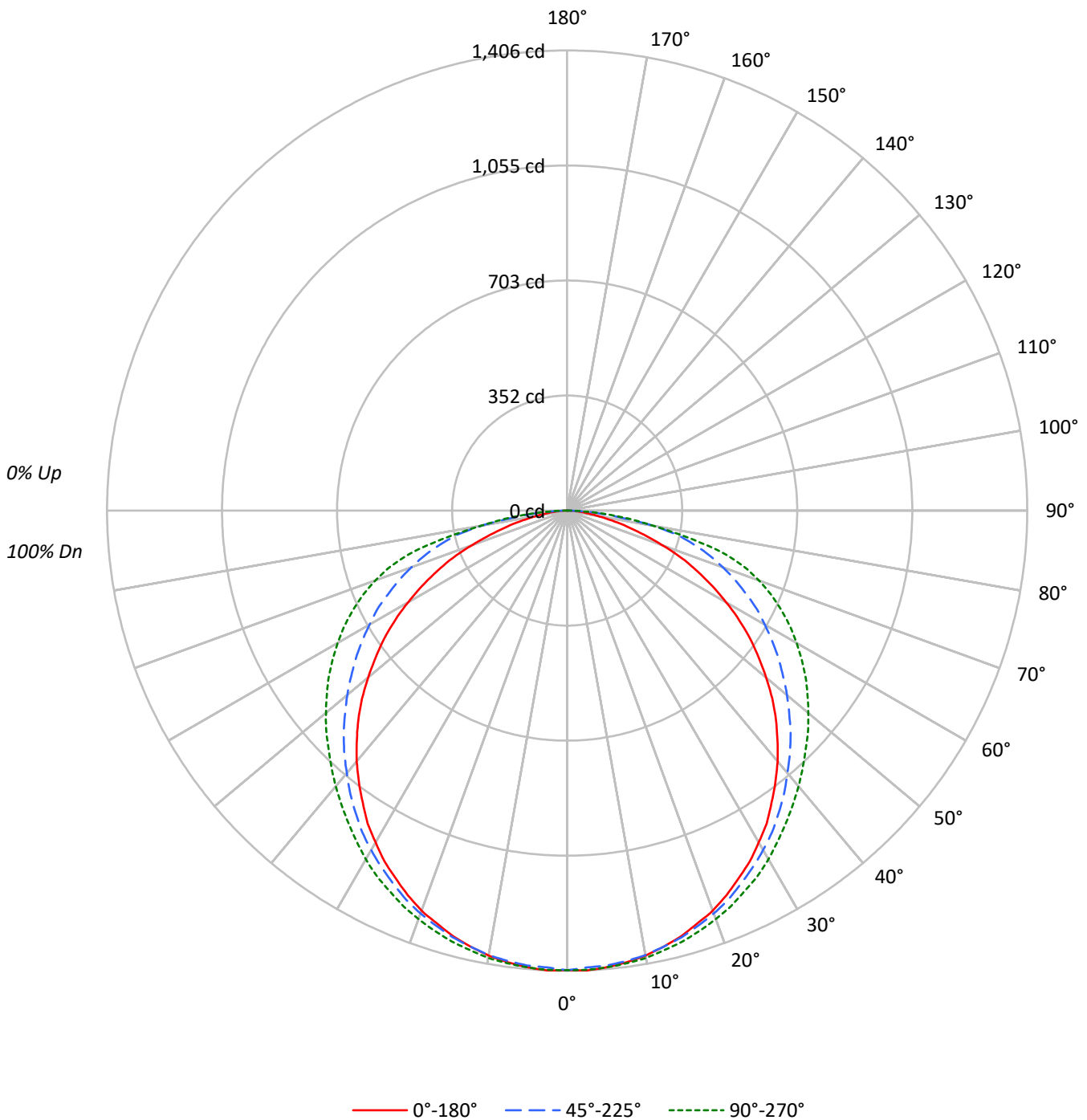
Input Watts (W): 48.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1890	1890	1890
5°	1892	1885	1892
10°	1887	1884	1896
15°	1875	1880	1898
20°	1863	1876	1902
25°	1840	1867	1905
30°	1819	1861	1912
35°	1789	1851	1914
40°	1757	1840	1932
45°	1717	1838	1962
50°	1661	1836	2014
55°	1603	1849	2087
60°	1512	1877	2180
65°	1396	1921	2302
70°	1219	1989	2452
75°	989	2091	2534
80°	730	2050	2050
85°	559	1511	1706



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	133.0	3.1
10°-20°	382.0	8.8
20°-30°	581.6	13.4
30°-40°	706.2	16.3
40°-50°	746.1	17.2
50°-60°	704.0	16.3
60°-70°	585.4	13.5
70°-80°	385.1	8.9
80°-90°	105.0	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°	1096.7	25.3
0°-40°	1802.9	41.7
0°-60°	3253.0	75.2
0°-90°	4328.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4328.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1404	1404	1404	1404	1404	
5°	1401	1401	1395	1401	1401	133
15°	1346	1348	1350	1363	1363	380
25°	1240	1247	1258	1279	1283	572
35°	1089	1102	1127	1156	1165	682
45°	902	920	966	1013	1031	695
55°	683	712	788	863	890	608
65°	438	489	603	692	723	433
75°	190	277	402	477	488	205
85°	36	80	98	109	110	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1404.4	1404.4	1404.4	1404.4	1404.4
2.5°	1406.2	1404.4	1397.1	1404.4	1404.4
5°	1400.7	1400.7	1395.3	1400.7	1400.7
7.5°	1391.7	1391.7	1388.1	1395.3	1395.3
10°	1380.8	1380.8	1379.0	1388.1	1388.1
12.5°	1364.5	1366.3	1364.5	1375.4	1375.4
15°	1346.4	1348.2	1350.0	1362.7	1362.7
17.5°	1322.8	1326.5	1330.1	1344.6	1346.4
20°	1301.1	1302.9	1310.1	1326.5	1328.3
22.5°	1272.1	1277.5	1286.6	1302.9	1308.3
25°	1239.5	1246.7	1257.6	1279.3	1283.0
27.5°	1208.7	1214.1	1228.6	1252.2	1259.4
30°	1170.6	1179.7	1197.8	1221.3	1230.4
32.5°	1134.4	1143.4	1165.2	1190.5	1197.8
35°	1089.1	1101.8	1127.1	1156.1	1165.2
37.5°	1045.6	1058.3	1089.1	1121.7	1132.6
40°	1000.3	1014.8	1047.4	1085.4	1099.9
42.5°	951.3	971.3	1007.5	1049.2	1065.5
45°	902.4	920.5	965.8	1013.0	1031.1
47.5°	849.9	871.6	920.5	976.7	998.5
50°	793.7	820.9	877.1	938.7	962.2
52.5°	737.5	768.3	831.7	900.6	926.0
55°	683.2	712.2	788.3	862.6	889.7
57.5°	623.4	659.6	743.0	822.7	849.9
60°	561.7	601.6	697.7	781.0	810.0
62.5°	500.1	545.4	654.2	737.5	768.3
65°	438.5	489.3	603.4	692.2	723.0
67.5°	378.7	434.9	556.3	645.1	675.9
70°	309.9	380.5	505.6	592.6	623.4
72.5°	246.4	328.0	456.6	538.2	565.4
75°	190.3	277.2	402.3	476.6	487.5
77.5°	139.5	226.5	346.1	371.5	373.3
80°	94.2	181.2	264.6	260.9	264.6
82.5°	61.6	135.9	166.7	186.6	188.5
85°	36.2	79.7	97.9	108.7	110.5
87.5°	18.1	27.2	34.4	36.2	39.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)