

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: P391561

Luminaire Tested: **24CZ2-65VHE-HRP-UNV-L935-CD1-SWPD1-U**

Issue Date: 2/28/2020

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: P391561  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-65VHE-HRP-UNV-L935-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4653.0 lumens  
Efficiency: N/A  
Efficacy: 110.3 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

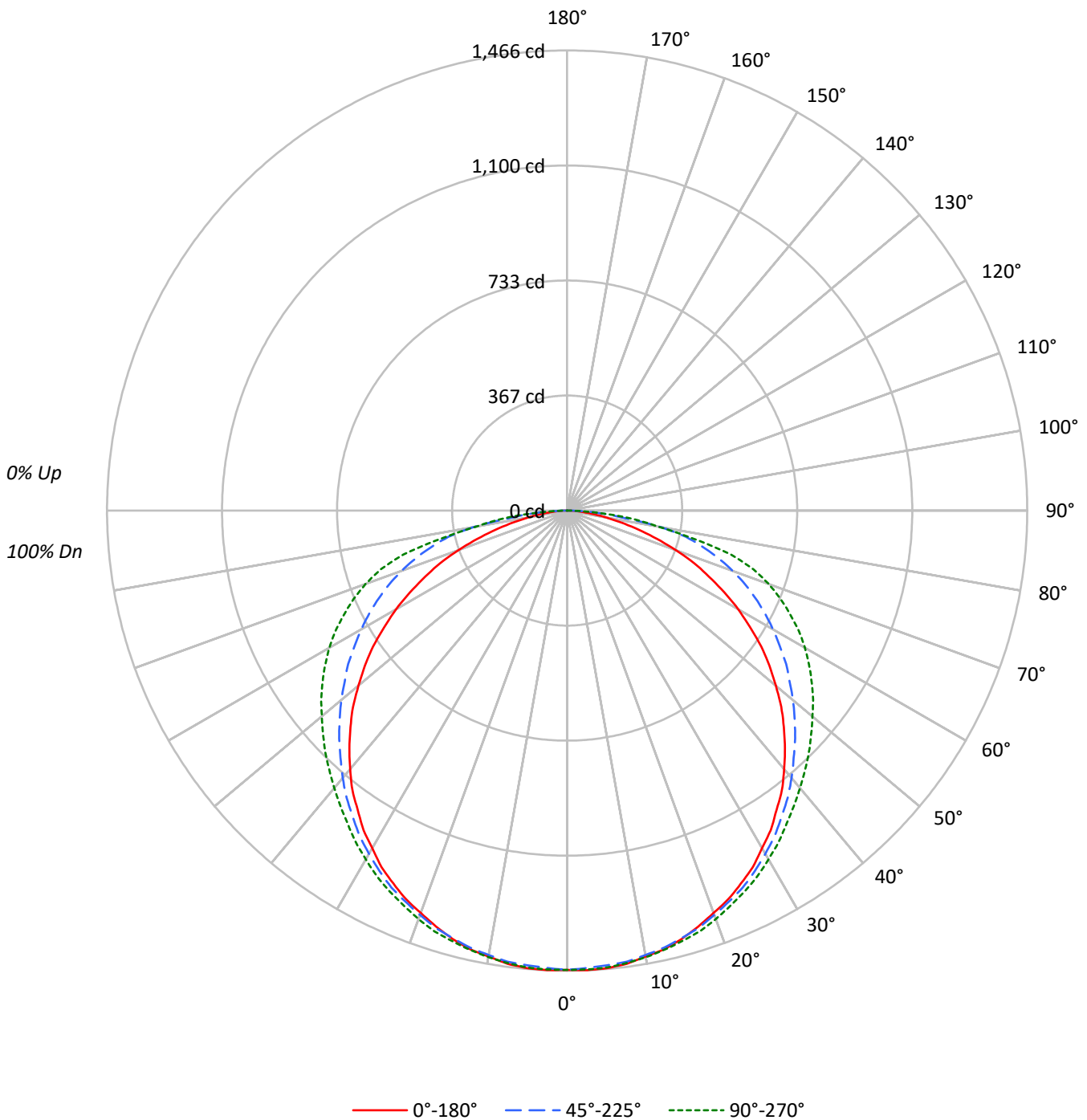
Input Watts (W): 42.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	68	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	1969	1969	1969
5°	1976	1964	1973
10°	1971	1964	1974
15°	1968	1964	1977
20°	1953	1963	1983
25°	1946	1967	1987
30°	1929	1961	1994
35°	1911	1956	2002
40°	1889	1954	2027
45°	1858	1954	2073
50°	1816	1966	2135
55°	1770	1998	2231
60°	1696	2037	2354
65°	1587	2109	2498
70°	1444	2206	2688
75°	1224	2327	2808
80°	965	2342	2271
85°	713	1782	1995



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	138.8	3.0
10°-20°	399.5	8.6
20°-30°	610.9	13.1
30°-40°	746.8	16.0
40°-50°	795.9	17.1
50°-60°	761.0	16.4
60°-70°	644.7	13.9
70°-80°	433.2	9.3
80°-90°	122.2	2.6
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°	1149.1	24.7
0°-40°	1895.9	40.7
0°-60°	3452.9	74.2
0°-90°	4653.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4653.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1463	1463	1463	1463	1463	
5°	1463	1461	1454	1461	1461	139
15°	1412	1412	1410	1422	1419	398
25°	1311	1316	1325	1336	1339	604
35°	1163	1172	1191	1214	1219	729
45°	976	992	1027	1071	1089	753
55°	755	782	852	919	951	672
65°	498	549	662	750	785	495
75°	235	321	448	524	540	252
85°	46	95	115	125	129	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1463.2	1463.2	1463.2	1463.2	1463.2
2.5°	1465.5	1465.5	1458.6	1463.2	1463.2
5°	1463.2	1460.9	1454.0	1460.9	1460.9
7.5°	1456.3	1454.0	1449.4	1456.3	1454.0
10°	1442.5	1442.5	1437.8	1444.8	1444.8
12.5°	1430.9	1428.6	1426.3	1435.5	1433.2
15°	1412.5	1412.5	1410.2	1421.7	1419.4
17.5°	1389.4	1391.7	1394.0	1403.2	1405.5
20°	1364.0	1368.6	1370.9	1384.8	1384.8
22.5°	1340.9	1343.2	1347.8	1361.7	1361.7
25°	1310.9	1315.5	1324.8	1336.3	1338.6
27.5°	1280.9	1283.2	1294.8	1310.9	1313.2
30°	1241.7	1248.6	1262.4	1280.9	1283.2
32.5°	1207.1	1214.0	1230.1	1248.6	1253.2
35°	1163.2	1172.4	1190.9	1214.0	1218.6
37.5°	1124.0	1130.9	1154.0	1179.4	1186.3
40°	1075.5	1089.3	1112.4	1142.4	1154.0
42.5°	1027.0	1040.9	1068.6	1107.8	1121.7
45°	976.3	992.4	1027.0	1070.9	1089.3
47.5°	925.5	943.9	983.2	1034.0	1054.7
50°	867.8	890.9	939.3	997.0	1020.1
52.5°	812.4	840.1	893.2	957.8	987.8
55°	754.7	782.4	851.6	918.6	950.9
57.5°	690.1	727.0	803.2	879.3	913.9
60°	630.1	664.7	757.0	840.1	874.7
62.5°	565.4	611.6	710.8	798.5	833.2
65°	498.5	549.3	662.4	750.1	784.7
67.5°	438.5	493.9	613.9	701.6	736.2
70°	367.0	436.2	560.8	648.5	683.2
72.5°	300.0	376.2	505.4	590.8	623.1
75°	235.4	320.8	447.7	523.9	540.1
77.5°	175.4	265.4	387.7	420.0	408.5
80°	124.6	212.3	302.3	286.2	293.1
82.5°	80.8	161.6	186.9	212.3	219.3
85°	46.2	94.6	115.4	124.6	129.2
87.5°	20.8	34.6	46.2	46.2	43.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)