

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: P391518

Luminaire Tested: **24CZ2-60VHE-HRP-UNV-L950-CD1-SDWPD1-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: P391518  
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: 24CZ2-60VHE-HRP-UNV-L950-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4546.8 lumens  
Efficiency: N/A  
Efficacy: 117.5 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

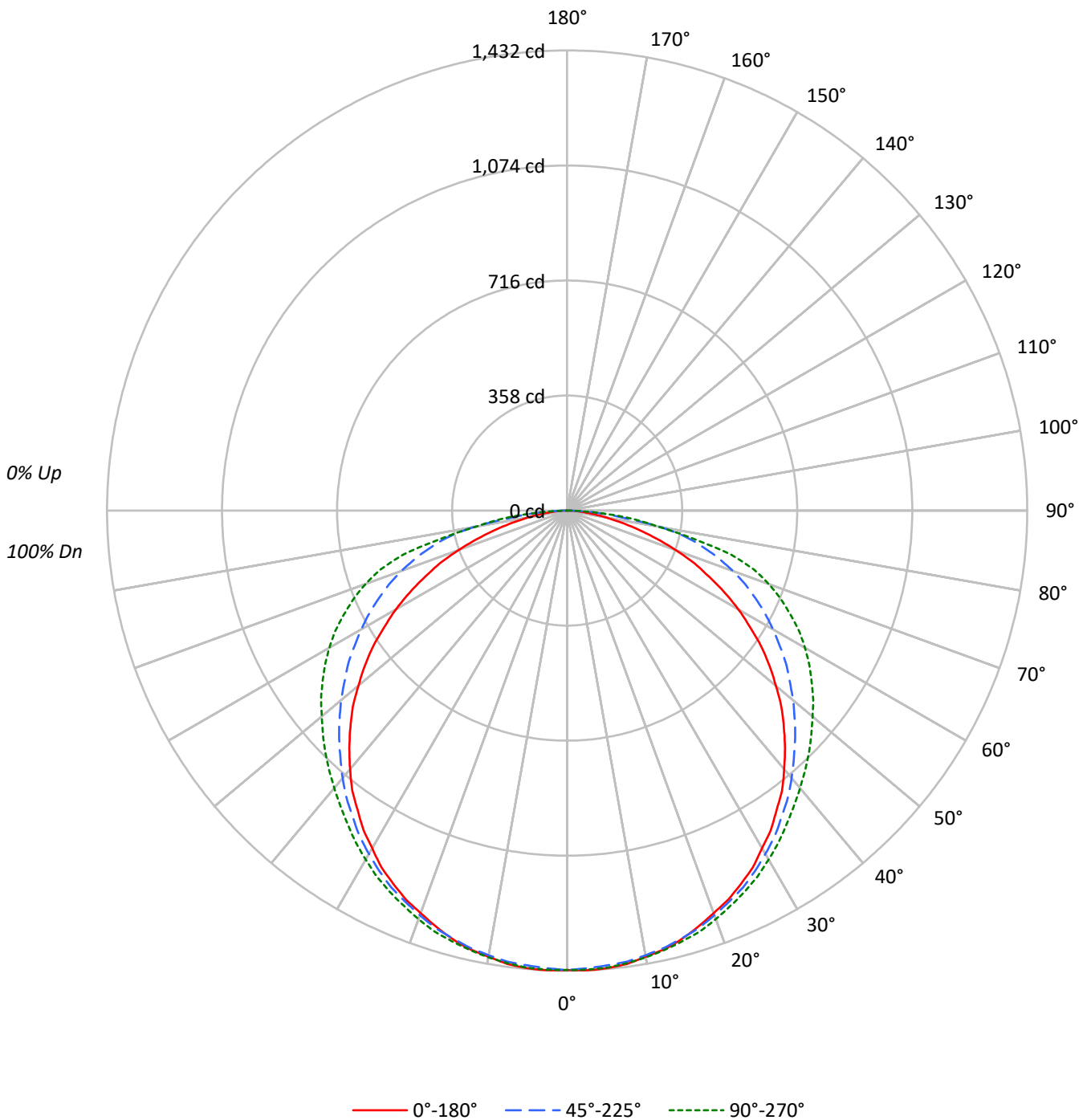
Input Watts (W): 38.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	67	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°	1924	1924	1924
5°	1931	1919	1928
10°	1926	1920	1929
15°	1923	1919	1932
20°	1908	1918	1938
25°	1902	1922	1942
30°	1885	1917	1948
35°	1867	1911	1956
40°	1846	1909	1981
45°	1815	1910	2026
50°	1775	1921	2087
55°	1730	1952	2180
60°	1657	1991	2300
65°	1551	2061	2441
70°	1411	2156	2626
75°	1196	2274	2743
80°	944	2289	2219
85°	696	1741	1950



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.6	3.0
10°-20°	390.4	8.6
20°-30°	596.9	13.1
30°-40°	729.7	16.0
40°-50°	777.8	17.1
50°-60°	743.6	16.4
60°-70°	629.9	13.9
70°-80°	423.4	9.3
80°-90°	119.4	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°	1122.9	24.7
0°-40°	1852.7	40.7
0°-60°	3374.0	74.2
0°-90°	4546.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4546.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1430	1430	1430	1430	1430	
5°	1430	1428	1421	1428	1428	136
15°	1380	1380	1378	1389	1387	389
25°	1281	1286	1294	1306	1308	590
35°	1137	1146	1164	1186	1191	712
45°	954	970	1004	1046	1064	736
55°	738	764	832	898	929	657
65°	487	537	647	733	767	484
75°	230	314	438	512	528	246
85°	45	92	113	122	126	56
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1429.8	1429.8	1429.8	1429.8	1429.8
2.5°	1432.1	1432.1	1425.3	1429.8	1429.8
5°	1429.8	1427.6	1420.8	1427.6	1427.6
7.5°	1423.1	1420.8	1416.3	1423.1	1420.8
10°	1409.5	1409.5	1405.0	1411.8	1411.8
12.5°	1398.3	1396.0	1393.8	1402.8	1400.5
15°	1380.2	1380.2	1378.0	1389.2	1387.0
17.5°	1357.7	1359.9	1362.2	1371.2	1373.5
20°	1332.9	1337.4	1339.6	1353.2	1353.2
22.5°	1310.3	1312.6	1317.1	1330.6	1330.6
25°	1281.0	1285.5	1294.5	1305.8	1308.1
27.5°	1251.7	1253.9	1265.2	1281.0	1283.2
30°	1213.3	1220.1	1233.6	1251.7	1253.9
32.5°	1179.5	1186.3	1202.1	1220.1	1224.6
35°	1136.7	1145.7	1163.7	1186.3	1190.8
37.5°	1098.3	1105.1	1127.6	1152.4	1159.2
40°	1051.0	1064.5	1087.0	1116.4	1127.6
42.5°	1003.6	1017.1	1044.2	1082.5	1096.1
45°	954.0	969.8	1003.6	1046.4	1064.5
47.5°	904.4	922.4	960.7	1010.4	1030.7
50°	848.0	870.5	917.9	974.3	996.8
52.5°	793.9	820.9	872.8	935.9	965.3
55°	737.5	764.5	832.2	897.6	929.2
57.5°	674.3	710.4	784.8	859.3	893.1
60°	615.7	649.5	739.7	820.9	854.7
62.5°	552.5	597.6	694.6	780.3	814.2
65°	487.1	536.8	647.3	733.0	766.8
67.5°	428.5	482.6	599.9	685.6	719.4
70°	358.6	426.2	548.0	633.7	667.6
72.5°	293.2	367.6	493.9	577.3	608.9
75°	230.0	313.5	437.5	511.9	527.7
77.5°	171.4	259.4	378.9	410.5	399.2
80°	121.8	207.5	295.4	279.7	286.4
82.5°	78.9	157.9	182.7	207.5	214.3
85°	45.1	92.5	112.8	121.8	126.3
87.5°	20.3	33.8	45.1	45.1	42.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)