

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: P390028

Luminaire Tested: **22CZ2-100VHE-HRP-UNV-L940-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: P390028  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-100VHE-HRP-UNV-L940-CD1-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7238.3 lumens  
Efficiency: N/A  
Efficacy: 93.2 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

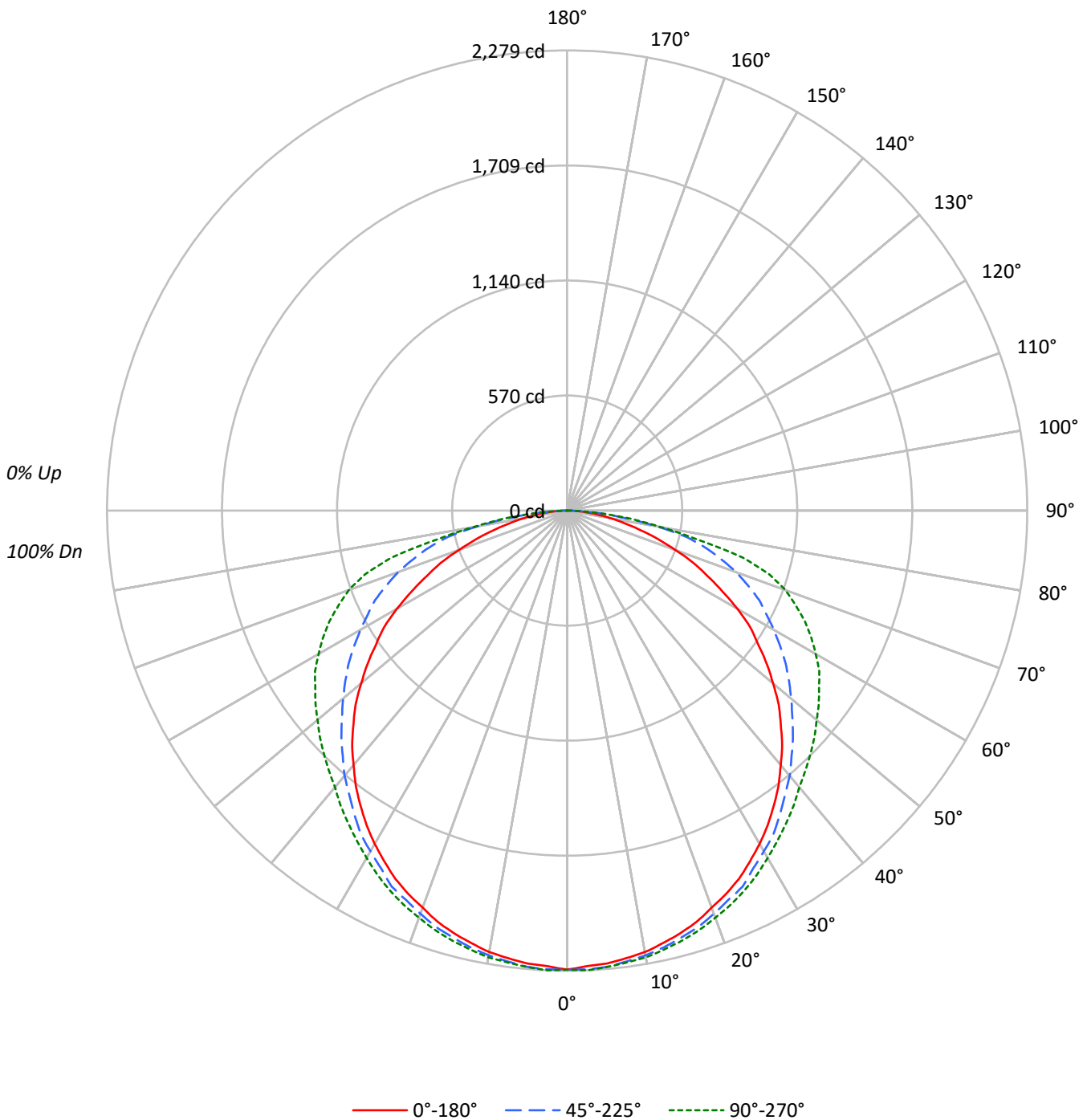
Input Watts (W): 77.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	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°	6118	6118	6118
5°	6084	6128	6128
10°	6067	6111	6140
15°	6038	6097	6142
20°	5993	6084	6145
25°	5976	6103	6166
30°	5923	6056	6171
35°	5860	6035	6210
40°	5780	6023	6285
45°	5694	6019	6484
50°	5573	6063	6754
55°	5421	6195	7145
60°	5244	6362	7652
65°	4883	6679	8273
70°	4483	6996	9049
75°	3931	7363	9356
80°	3383	7014	7344
85°	2958	5098	5588



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	215.1	3.0
10°-20°	617.5	8.5
20°-30°	942.1	13.0
30°-40°	1150.4	15.9
40°-50°	1230.0	17.0
50°-60°	1187.2	16.4
60°-70°	1022.0	14.1
70°-80°	691.5	9.6
80°-90°	182.5	2.5
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°	1774.7	24.5
0°-40°	2925.1	40.4
0°-60°	5342.4	73.8
0°-90°	7238.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7238.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2274	2274	2274	2274	2274	
5°	2252	2258	2268	2268	2268	214
15°	2167	2172	2188	2199	2204	611
25°	2013	2023	2055	2066	2077	926
35°	1784	1800	1837	1874	1890	1116
45°	1496	1523	1582	1661	1704	1155
55°	1156	1193	1320	1454	1523	1035
65°	767	841	1049	1214	1299	763
75°	378	500	708	852	900	406
85°	96	133	165	170	181	108
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2273.7	2273.7	2273.7	2273.7	2273.7
2.5°	2257.7	2263.0	2273.7	2273.7	2279.0
5°	2252.4	2257.7	2268.4	2268.4	2268.4
7.5°	2236.4	2241.7	2252.4	2257.7	2257.7
10°	2220.4	2225.8	2236.4	2241.7	2247.1
12.5°	2193.8	2199.1	2215.1	2225.8	2225.8
15°	2167.2	2172.5	2188.5	2199.1	2204.5
17.5°	2135.2	2145.9	2161.9	2172.5	2177.8
20°	2092.6	2103.3	2124.6	2140.6	2145.9
22.5°	2055.4	2066.0	2087.3	2103.3	2113.9
25°	2012.8	2023.4	2055.4	2066.0	2076.7
27.5°	1959.5	1970.2	1996.8	2018.1	2034.1
30°	1906.3	1916.9	1948.9	1975.5	1986.1
32.5°	1847.7	1863.7	1900.9	1922.2	1938.2
35°	1783.8	1799.8	1837.0	1874.3	1890.3
37.5°	1719.9	1735.9	1773.1	1821.1	1842.4
40°	1645.4	1666.7	1714.6	1778.5	1789.1
42.5°	1576.1	1602.8	1645.4	1719.9	1746.5
45°	1496.3	1522.9	1581.5	1661.3	1703.9
47.5°	1421.7	1448.3	1512.2	1608.1	1661.3
50°	1331.2	1368.5	1448.3	1560.2	1613.4
52.5°	1246.0	1277.9	1384.4	1506.9	1570.8
55°	1155.5	1192.7	1320.5	1453.7	1522.9
57.5°	1075.6	1107.6	1251.3	1400.4	1480.3
60°	974.4	1017.0	1182.1	1341.8	1421.7
62.5°	867.9	931.8	1112.9	1277.9	1363.1
65°	766.8	841.3	1049.0	1214.0	1299.2
67.5°	676.2	756.1	969.1	1144.8	1224.7
70°	569.8	670.9	889.2	1059.6	1150.1
72.5°	473.9	585.7	798.7	969.1	1049.0
75°	378.1	500.5	708.2	852.0	899.9
77.5°	292.9	410.0	607.0	649.6	654.9
80°	218.3	324.8	452.6	457.9	473.9
82.5°	149.1	229.0	292.9	319.5	324.8
85°	95.8	133.1	165.1	170.4	181.0
87.5°	42.6	47.9	58.6	53.2	53.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)