

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: P390796

Luminaire Tested: **22CZ2-90VHE-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: P390796  
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: 22CZ2-90VHE-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: 6534.4 lumens  
Efficiency: N/A  
Efficacy: 95.8 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

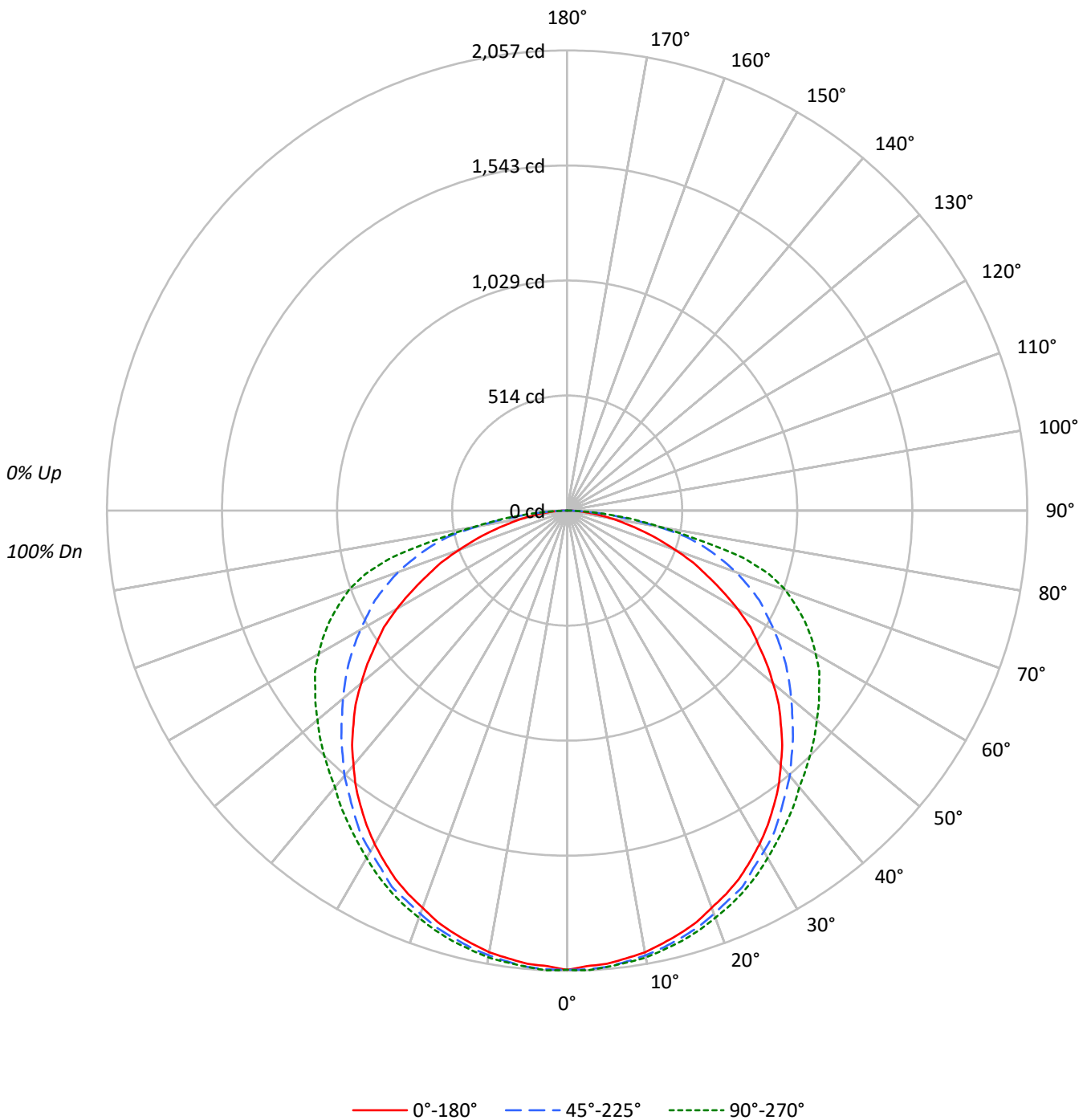
Input Watts (W): 68.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	5524	5524	5524
5°	5492	5532	5532
10°	5477	5517	5543
15°	5450	5504	5544
20°	5410	5493	5548
25°	5395	5509	5566
30°	5347	5467	5571
35°	5290	5448	5606
40°	5218	5437	5674
45°	5141	5433	5854
50°	5031	5474	6098
55°	4894	5593	6450
60°	4735	5743	6908
65°	4408	6030	7468
70°	4046	6316	8169
75°	3549	6647	8447
80°	3054	6332	6630
85°	2671	4600	5045



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	194.2	3.0
10°-20°	557.5	8.5
20°-30°	850.5	13.0
30°-40°	1038.5	15.9
40°-50°	1110.4	17.0
50°-60°	1071.8	16.4
60°-70°	922.6	14.1
70°-80°	624.2	9.6
80°-90°	164.7	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°	1602.1	24.5
0°-40°	2640.6	40.4
0°-60°	4822.8	73.8
0°-90°	6534.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6534.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2053	2053	2053	2053	2053	
5°	2033	2038	2048	2048	2048	193
15°	1956	1961	1976	1985	1990	552
25°	1817	1827	1856	1865	1875	836
35°	1610	1625	1658	1692	1706	1008
45°	1351	1375	1428	1500	1538	1043
55°	1043	1077	1192	1312	1375	935
65°	692	760	947	1096	1173	688
75°	341	452	639	769	812	366
85°	86	120	149	154	163	97
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2052.6	2052.6	2052.6	2052.6	2052.6
2.5°	2038.1	2043.0	2052.6	2052.6	2057.4
5°	2033.3	2038.1	2047.8	2047.8	2047.8
7.5°	2018.9	2023.7	2033.3	2038.1	2038.1
10°	2004.5	2009.3	2018.9	2023.7	2028.5
12.5°	1980.5	1985.3	1999.7	2009.3	2009.3
15°	1956.4	1961.2	1975.7	1985.3	1990.1
17.5°	1927.6	1937.2	1951.6	1961.2	1966.0
20°	1889.1	1898.7	1918.0	1932.4	1937.2
22.5°	1855.5	1865.1	1884.3	1898.7	1908.4
25°	1817.0	1826.6	1855.5	1865.1	1874.7
27.5°	1769.0	1778.6	1802.6	1821.8	1836.3
30°	1720.9	1730.5	1759.3	1783.4	1793.0
32.5°	1668.0	1682.4	1716.1	1735.3	1749.7
35°	1610.3	1624.8	1658.4	1692.0	1706.5
37.5°	1552.6	1567.1	1600.7	1644.0	1663.2
40°	1485.3	1504.6	1547.8	1605.5	1615.1
42.5°	1422.9	1446.9	1485.3	1552.6	1576.7
45°	1350.8	1374.8	1427.7	1499.8	1538.2
47.5°	1283.5	1307.5	1365.2	1451.7	1499.8
50°	1201.7	1235.4	1307.5	1408.4	1456.5
52.5°	1124.8	1153.7	1249.8	1360.4	1418.1
55°	1043.1	1076.8	1192.1	1312.3	1374.8
57.5°	971.0	999.8	1129.6	1264.2	1336.3
60°	879.7	918.1	1067.1	1211.4	1283.5
62.5°	783.5	841.2	1004.7	1153.7	1230.6
65°	692.2	759.5	947.0	1096.0	1172.9
67.5°	610.5	682.6	874.9	1033.5	1105.6
70°	514.3	605.7	802.8	956.6	1038.3
72.5°	427.8	528.8	721.0	874.9	947.0
75°	341.3	451.9	639.3	769.1	812.4
77.5°	264.4	370.1	548.0	586.4	591.3
80°	197.1	293.2	408.6	413.4	427.8
82.5°	134.6	206.7	264.4	288.4	293.2
85°	86.5	120.2	149.0	153.8	163.4
87.5°	38.5	43.3	52.9	48.1	48.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)