

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: P390697

Luminaire Tested: **22CZ2-80VHE-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: P390697  
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: 22CZ2-80VHE-HRP-UNV-L935-CD1-SWPD1-U  
Description: 2x2 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: 5735.3 lumens  
Efficiency: N/A  
Efficacy: 97.0 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

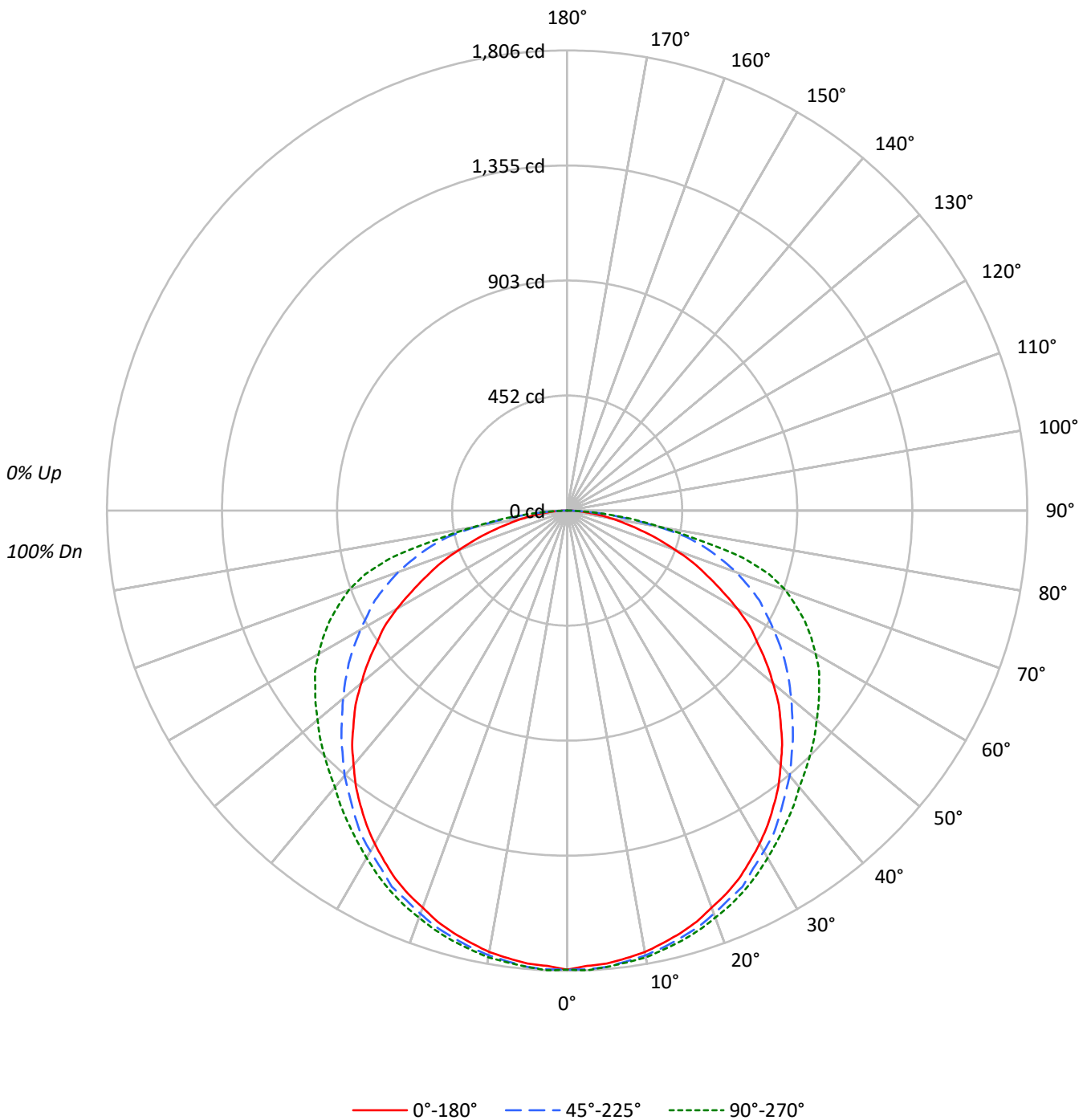
Input Watts (W): 59.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82					82			
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67					67			
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55					55			
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47					47			
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40					40			
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35					35			
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31					31			
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27					27			
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24					24			
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22					22			

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

	0°	45°	90°
0°	4848	4848	4848
5°	4821	4855	4855
10°	4808	4842	4865
15°	4784	4831	4866
20°	4748	4821	4869
25°	4735	4836	4886
30°	4693	4798	4890
35°	4643	4782	4920
40°	4580	4773	4980
45°	4512	4769	5138
50°	4416	4804	5352
55°	4295	4909	5661
60°	4155	5041	6063
65°	3869	5293	6555
70°	3552	5544	7170
75°	3115	5834	7413
80°	2681	5557	5819
85°	2343	4039	4428



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	170.4	3.0
10°-20°	489.3	8.5
20°-30°	746.5	13.0
30°-40°	911.5	15.9
40°-50°	974.6	17.0
50°-60°	940.7	16.4
60°-70°	809.8	14.1
70°-80°	547.9	9.6
80°-90°	144.6	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°	1406.2	24.5
0°-40°	2317.7	40.4
0°-60°	4233.1	73.8
0°-90°	5735.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5735.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1802	1802	1802	1802	1802	
5°	1785	1789	1797	1797	1797	169
15°	1717	1721	1734	1742	1747	484
25°	1595	1603	1629	1637	1646	734
35°	1413	1426	1456	1485	1498	884
45°	1186	1207	1253	1316	1350	915
55°	916	945	1046	1152	1207	820
65°	608	667	831	962	1030	604
75°	300	397	561	675	713	321
85°	76	106	131	135	143	86
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1801.6	1801.6	1801.6	1801.6	1801.6
2.5°	1788.9	1793.1	1801.6	1801.6	1805.8
5°	1784.7	1788.9	1797.3	1797.3	1797.3
7.5°	1772.0	1776.2	1784.7	1788.9	1788.9
10°	1759.4	1763.6	1772.0	1776.2	1780.5
12.5°	1738.3	1742.5	1755.1	1763.6	1763.6
15°	1717.2	1721.4	1734.1	1742.5	1746.7
17.5°	1691.9	1700.3	1713.0	1721.4	1725.6
20°	1658.1	1666.5	1683.4	1696.1	1700.3
22.5°	1628.6	1637.0	1653.9	1666.5	1675.0
25°	1594.8	1603.3	1628.6	1637.0	1645.5
27.5°	1552.6	1561.1	1582.2	1599.0	1611.7
30°	1510.4	1518.9	1544.2	1565.3	1573.7
32.5°	1464.0	1476.7	1506.2	1523.1	1535.8
35°	1413.4	1426.1	1455.6	1485.1	1497.8
37.5°	1362.8	1375.4	1405.0	1442.9	1459.8
40°	1303.7	1320.6	1358.6	1409.2	1417.6
42.5°	1248.9	1270.0	1303.7	1362.8	1383.9
45°	1185.6	1206.7	1253.1	1316.4	1350.1
47.5°	1126.5	1147.6	1198.2	1274.2	1316.4
50°	1054.8	1084.3	1147.6	1236.2	1278.4
52.5°	987.3	1012.6	1097.0	1194.0	1244.6
55°	915.5	945.1	1046.3	1151.8	1206.7
57.5°	852.3	877.6	991.5	1109.6	1172.9
60°	772.1	805.8	936.6	1063.2	1126.5
62.5°	687.7	738.3	881.8	1012.6	1080.1
65°	607.6	666.6	831.2	962.0	1029.5
67.5°	535.8	599.1	767.9	907.1	970.4
70°	451.4	531.6	704.6	839.6	911.3
72.5°	375.5	464.1	632.9	767.9	831.2
75°	299.6	396.6	561.1	675.1	713.0
77.5°	232.1	324.9	481.0	514.7	518.9
80°	173.0	257.4	358.6	362.8	375.5
82.5°	118.1	181.4	232.1	253.1	257.4
85°	75.9	105.5	130.8	135.0	143.4
87.5°	33.8	38.0	46.4	42.2	42.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)