

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: P390554

Luminaire Tested: **22CZ2-65VHE-HRP-UNV-L935-CD1-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: P390554  
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: 22CZ2-65VHE-HRP-UNV-L935-CD1-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: 4707.2 lumens  
Efficiency: N/A  
Efficacy: 98.3 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

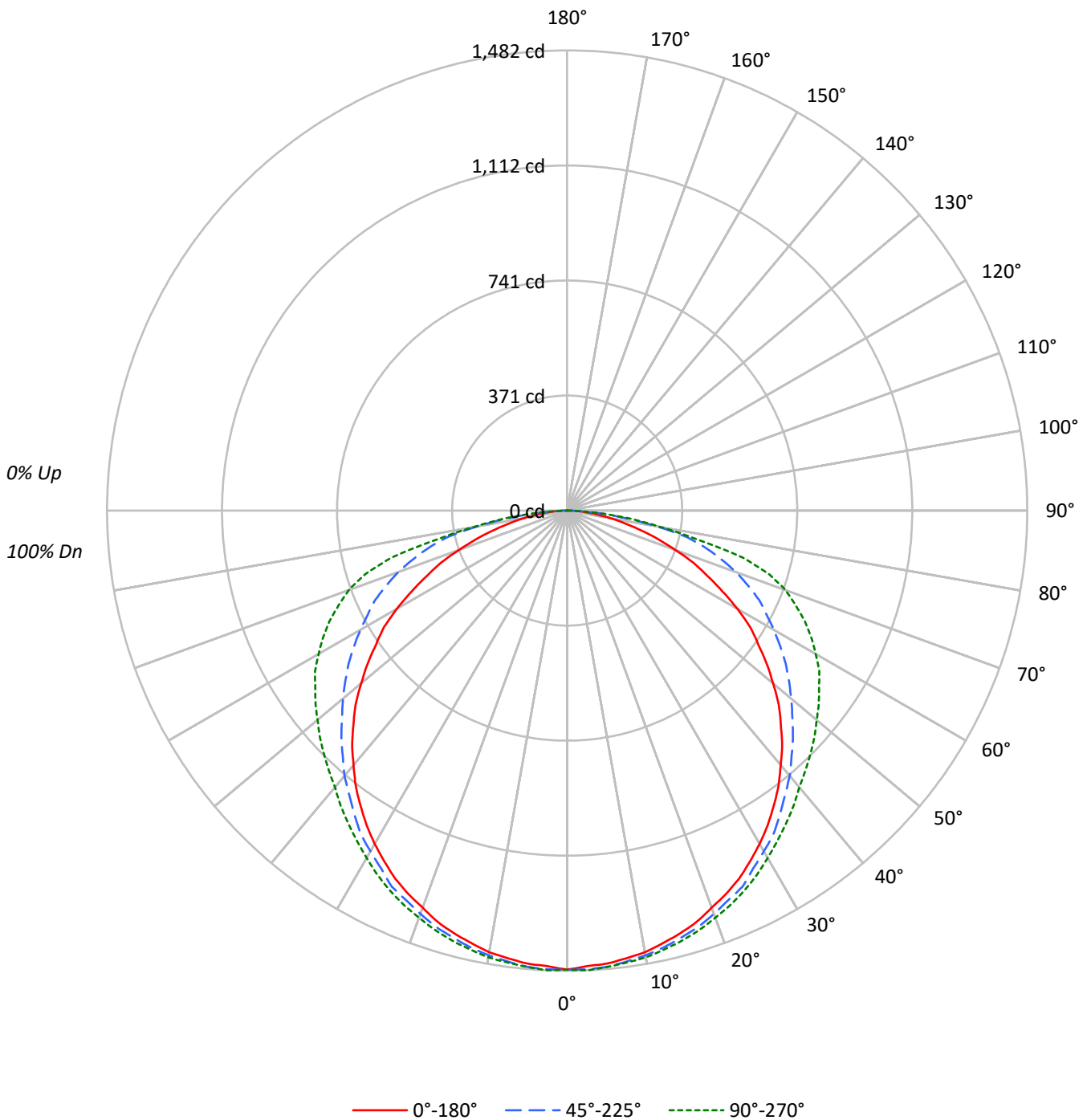
Input Watts (W): 47.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3979	3979	3979
5°	3957	3985	3985
10°	3946	3974	3993
15°	3926	3965	3994
20°	3897	3957	3996
25°	3886	3969	4010
30°	3852	3938	4013
35°	3811	3925	4038
40°	3759	3917	4087
45°	3703	3914	4217
50°	3624	3943	4392
55°	3525	4029	4647
60°	3411	4137	4976
65°	3175	4344	5380
70°	2915	4550	5885
75°	2557	4789	6084
80°	2201	4561	4776
85°	1924	3313	3634



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.9	3.0
10°-20°	401.6	8.5
20°-30°	612.7	13.0
30°-40°	748.1	15.9
40°-50°	799.9	17.0
50°-60°	772.1	16.4
60°-70°	664.6	14.1
70°-80°	449.7	9.6
80°-90°	118.7	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°	1154.1	24.5
0°-40°	1902.3	40.4
0°-60°	3474.3	73.8
0°-90°	4707.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4707.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1479	1479	1479	1479	1479	
5°	1465	1468	1475	1475	1475	139
15°	1409	1413	1423	1430	1434	398
25°	1309	1316	1337	1344	1350	602
35°	1160	1170	1195	1219	1229	726
45°	973	990	1028	1080	1108	751
55°	751	776	859	945	990	673
65°	499	547	682	790	845	496
75°	246	326	461	554	585	264
85°	62	87	107	111	118	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1478.6	1478.6	1478.6	1478.6	1478.6
2.5°	1468.2	1471.7	1478.6	1478.6	1482.1
5°	1464.8	1468.2	1475.2	1475.2	1475.2
7.5°	1454.4	1457.8	1464.8	1468.2	1468.2
10°	1444.0	1447.4	1454.4	1457.8	1461.3
12.5°	1426.7	1430.1	1440.5	1447.4	1447.4
15°	1409.4	1412.8	1423.2	1430.1	1433.6
17.5°	1388.6	1395.5	1405.9	1412.8	1416.3
20°	1360.9	1367.8	1381.7	1392.0	1395.5
22.5°	1336.6	1343.6	1357.4	1367.8	1374.7
25°	1308.9	1315.9	1336.6	1343.6	1350.5
27.5°	1274.3	1281.2	1298.5	1312.4	1322.8
30°	1239.7	1246.6	1267.4	1284.7	1291.6
32.5°	1201.6	1212.0	1236.2	1250.1	1260.5
35°	1160.0	1170.4	1194.7	1218.9	1229.3
37.5°	1118.5	1128.9	1153.1	1184.3	1198.1
40°	1070.0	1083.9	1115.0	1156.6	1163.5
42.5°	1025.0	1042.3	1070.0	1118.5	1135.8
45°	973.0	990.4	1028.5	1080.4	1108.1
47.5°	924.6	941.9	983.4	1045.8	1080.4
50°	865.7	889.9	941.9	1014.6	1049.2
52.5°	810.3	831.1	900.3	980.0	1021.5
55°	751.4	775.7	858.8	945.3	990.4
57.5°	699.5	720.3	813.8	910.7	962.7
60°	633.7	661.4	768.7	872.6	924.6
62.5°	564.4	606.0	723.7	831.1	886.5
65°	498.6	547.1	682.2	789.5	844.9
67.5°	439.8	491.7	630.2	744.5	796.4
70°	370.5	436.3	578.3	689.1	748.0
72.5°	308.2	380.9	519.4	630.2	682.2
75°	245.9	325.5	460.6	554.0	585.2
77.5°	190.5	266.6	394.8	422.5	425.9
80°	142.0	211.2	294.3	297.8	308.2
82.5°	97.0	148.9	190.5	207.8	211.2
85°	62.3	86.6	107.3	110.8	117.7
87.5°	27.7	31.2	38.1	34.6	34.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)