

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: P390557

Luminaire Tested: **22CZ2-65VHE-HRP-UNV-L940-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: P390557  
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-L940-CD1-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: 4755.9 lumens  
Efficiency: N/A  
Efficacy: 99.3 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

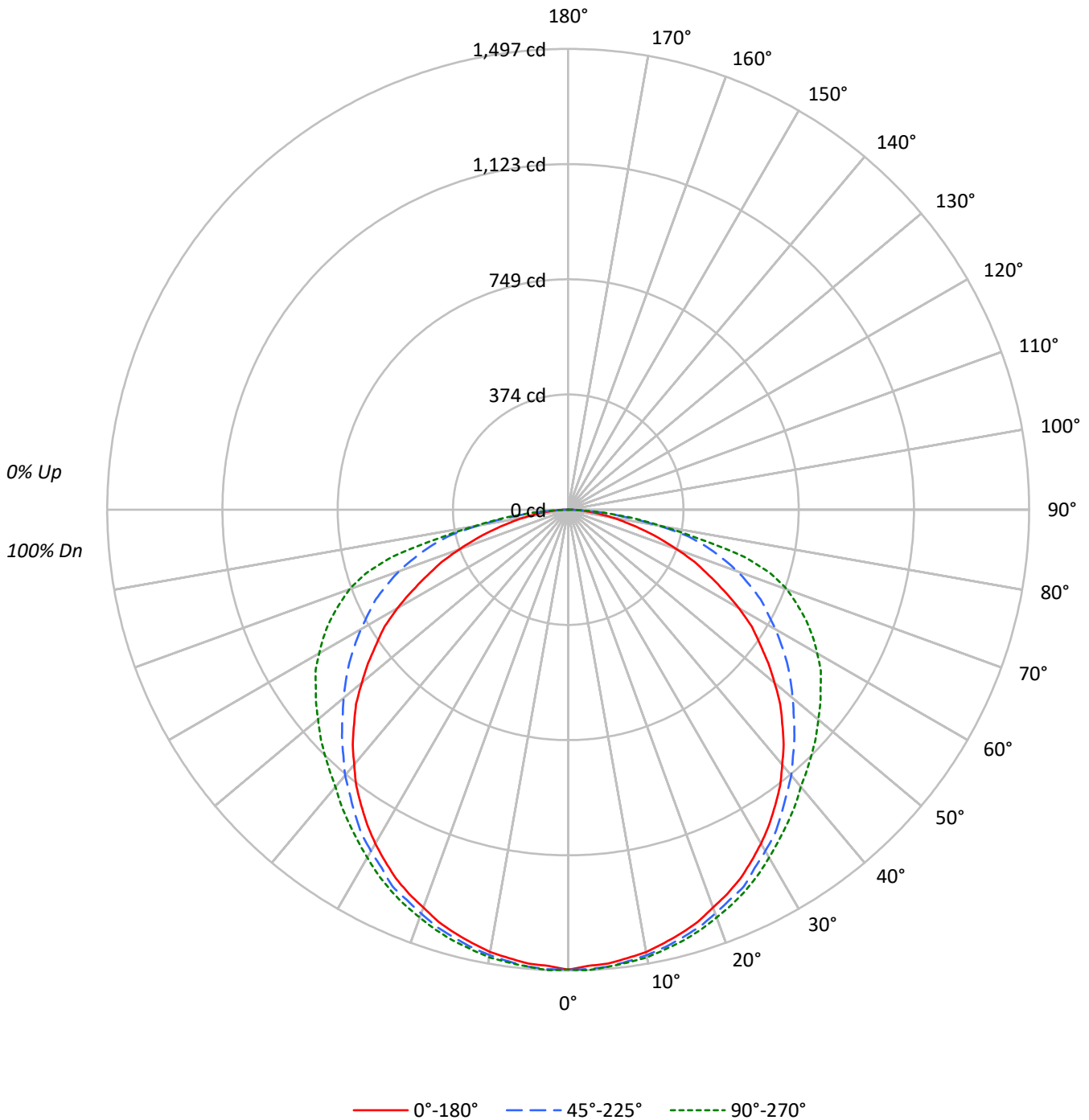
Input Watts (W): 47.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	4020	4020	4020
5°	3998	4026	4026
10°	3986	4015	4034
15°	3967	4006	4035
20°	3938	3997	4038
25°	3927	4010	4051
30°	3892	3979	4055
35°	3850	3965	4080
40°	3798	3958	4129
45°	3741	3954	4261
50°	3662	3984	4438
55°	3562	4071	4694
60°	3446	4180	5027
65°	3208	4388	5436
70°	2946	4597	5946
75°	2583	4838	6148
80°	2222	4609	4826
85°	1945	3350	3674



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.3	3.0
10°-20°	405.7	8.5
20°-30°	619.0	13.0
30°-40°	755.8	15.9
40°-50°	808.2	17.0
50°-60°	780.1	16.4
60°-70°	671.5	14.1
70°-80°	454.3	9.6
80°-90°	119.9	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°	1166.1	24.5
0°-40°	1921.9	40.4
0°-60°	3510.2	73.8
0°-90°	4755.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4755.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1494	1494	1494	1494	1494	
5°	1480	1483	1490	1490	1490	141
15°	1424	1427	1438	1445	1448	402
25°	1322	1330	1350	1358	1364	609
35°	1172	1182	1207	1232	1242	733
45°	983	1001	1039	1092	1120	759
55°	759	784	868	955	1001	680
65°	504	553	689	798	854	501
75°	248	329	465	560	591	267
85°	63	88	108	112	119	71
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1493.9	1493.9	1493.9	1493.9	1493.9
2.5°	1483.4	1486.9	1493.9	1493.9	1497.4
5°	1479.9	1483.4	1490.4	1490.4	1490.4
7.5°	1469.4	1472.9	1479.9	1483.4	1483.4
10°	1458.9	1462.4	1469.4	1472.9	1476.4
12.5°	1441.4	1444.9	1455.4	1462.4	1462.4
15°	1423.9	1427.4	1437.9	1444.9	1448.4
17.5°	1402.9	1409.9	1420.4	1427.4	1430.9
20°	1375.0	1382.0	1395.9	1406.4	1409.9
22.5°	1350.5	1357.5	1371.5	1382.0	1389.0
25°	1322.5	1329.5	1350.5	1357.5	1364.5
27.5°	1287.5	1294.5	1312.0	1326.0	1336.5
30°	1252.5	1259.5	1280.5	1298.0	1305.0
32.5°	1214.0	1224.5	1249.0	1263.0	1273.5
35°	1172.0	1182.5	1207.0	1231.5	1242.0
37.5°	1130.1	1140.6	1165.0	1196.5	1210.5
40°	1081.1	1095.1	1126.6	1168.5	1175.5
42.5°	1035.6	1053.1	1081.1	1130.1	1147.5
45°	983.1	1000.6	1039.1	1091.6	1119.6
47.5°	934.1	951.6	993.6	1056.6	1091.6
50°	874.7	899.1	951.6	1025.1	1060.1
52.5°	818.7	839.7	909.6	990.1	1032.1
55°	759.2	783.7	867.7	955.1	1000.6
57.5°	706.7	727.7	822.2	920.1	972.6
60°	640.2	668.2	776.7	881.7	934.1
62.5°	570.3	612.3	731.2	839.7	895.6
65°	503.8	552.8	689.2	797.7	853.7
67.5°	444.3	496.8	636.7	752.2	804.7
70°	374.4	440.8	584.3	696.2	755.7
72.5°	311.4	384.8	524.8	636.7	689.2
75°	248.4	328.9	465.3	559.8	591.3
77.5°	192.4	269.4	398.8	426.8	430.3
80°	143.4	213.4	297.4	300.9	311.4
82.5°	98.0	150.4	192.4	209.9	213.4
85°	63.0	87.5	108.5	112.0	119.0
87.5°	28.0	31.5	38.5	35.0	35.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)