

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: P391493

Luminaire Tested: **24CZ2-55VHE-RDP-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: P391493  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-55VHE-RDP-UNV-L940-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3200.1 lumens  
Efficiency: N/A  
Efficacy: 88.6 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

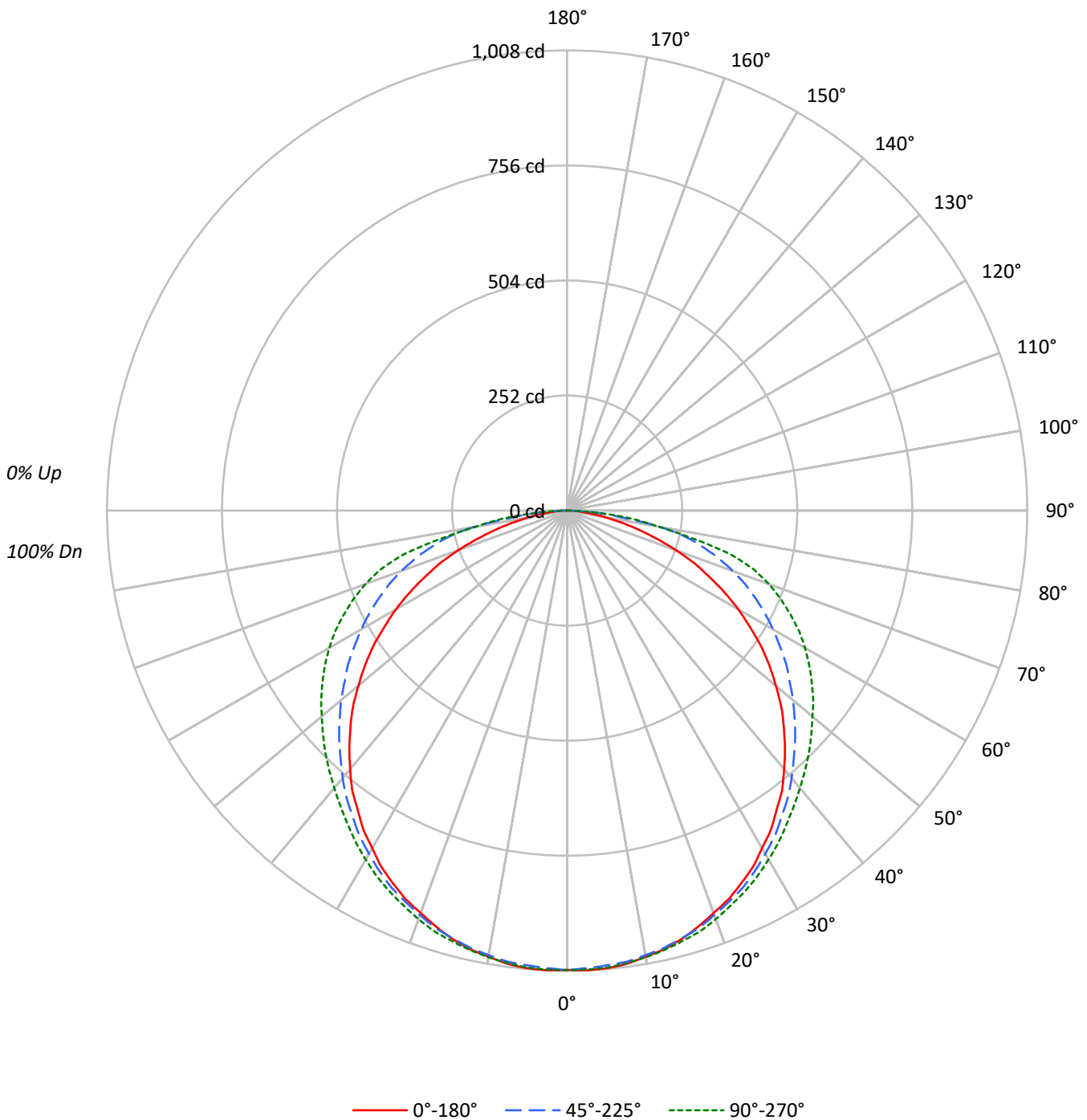
Input Watts (W): 36.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	68	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	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°	1354	1354	1354
5°	1359	1351	1357
10°	1355	1351	1358
15°	1353	1351	1360
20°	1343	1350	1364
25°	1339	1353	1367
30°	1327	1349	1371
35°	1314	1345	1377
40°	1299	1344	1394
45°	1278	1344	1426
50°	1249	1352	1469
55°	1217	1374	1534
60°	1166	1401	1619
65°	1092	1450	1718
70°	993	1517	1848
75°	842	1601	1931
80°	664	1611	1562
85°	489	1226	1372



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.5	3.0
10°-20°	274.7	8.6
20°-30°	420.1	13.1
30°-40°	513.6	16.0
40°-50°	547.4	17.1
50°-60°	523.4	16.4
60°-70°	443.4	13.9
70°-80°	298.0	9.3
80°-90°	84.0	2.6
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°	790.3	24.7
0°-40°	1303.9	40.7
0°-60°	2374.7	74.2
0°-90°	3200.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3200.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1006	1006	1006	1006	1006	
5°	1006	1005	1000	1005	1005	96
15°	971	971	970	978	976	274
25°	902	905	911	919	921	416
35°	800	806	819	835	838	501
45°	671	682	706	736	749	518
55°	519	538	586	632	654	462
65°	343	378	456	516	540	340
75°	162	221	308	360	371	173
85°	32	65	79	86	89	39
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1006.3	1006.3	1006.3	1006.3	1006.3
2.5°	1007.9	1007.9	1003.2	1006.3	1006.3
5°	1006.3	1004.8	1000.0	1004.8	1004.8
7.5°	1001.6	1000.0	996.8	1001.6	1000.0
10°	992.1	992.1	988.9	993.6	993.6
12.5°	984.1	982.5	980.9	987.3	985.7
15°	971.4	971.4	969.8	977.8	976.2
17.5°	955.5	957.1	958.7	965.1	966.7
20°	938.1	941.3	942.8	952.4	952.4
22.5°	922.2	923.8	927.0	936.5	936.5
25°	901.6	904.8	911.1	919.0	920.6
27.5°	880.9	882.5	890.5	901.6	903.2
30°	854.0	858.7	868.2	880.9	882.5
32.5°	830.2	834.9	846.0	858.7	861.9
35°	800.0	806.3	819.0	834.9	838.1
37.5°	773.0	777.8	793.6	811.1	815.9
40°	739.7	749.2	765.1	785.7	793.6
42.5°	706.3	715.9	734.9	761.9	771.4
45°	671.4	682.5	706.3	736.5	749.2
47.5°	636.5	649.2	676.2	711.1	725.4
50°	596.8	612.7	646.0	685.7	701.6
52.5°	558.7	577.8	614.3	658.7	679.4
55°	519.0	538.1	585.7	631.7	654.0
57.5°	474.6	500.0	552.4	604.8	628.6
60°	433.3	457.1	520.6	577.8	601.6
62.5°	388.9	420.6	488.9	549.2	573.0
65°	342.9	377.8	455.6	515.9	539.7
67.5°	301.6	339.7	422.2	482.5	506.3
70°	252.4	300.0	385.7	446.0	469.8
72.5°	206.3	258.7	347.6	406.3	428.6
75°	161.9	220.6	307.9	360.3	371.4
77.5°	120.6	182.5	266.7	288.9	280.9
80°	85.7	146.0	207.9	196.8	201.6
82.5°	55.6	111.1	128.6	146.0	150.8
85°	31.7	65.1	79.4	85.7	88.9
87.5°	14.3	23.8	31.7	31.7	30.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)