

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: P388804

Luminaire Tested: **24CZ2-40VHE-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: P388804  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-40VHE-UNV-L940-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3409.9 lumens  
Efficiency: N/A  
Efficacy: 130.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

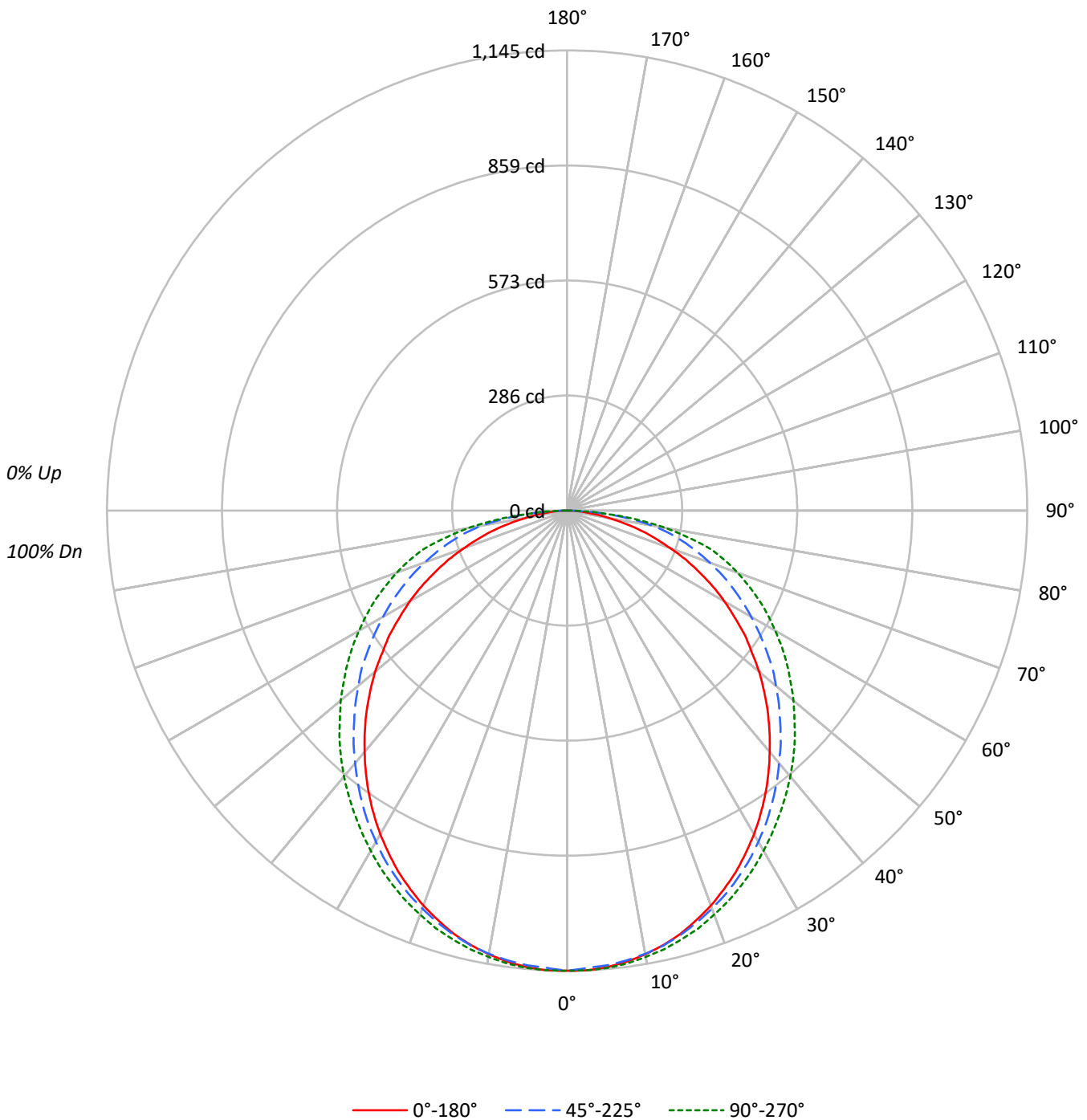
Input Watts (W): 26.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	93	89	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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

	0°	45°	90°
0°	1540	1540	1540
5°	1540	1534	1543
10°	1532	1530	1541
15°	1519	1522	1538
20°	1498	1509	1532
25°	1473	1495	1526
30°	1445	1478	1519
35°	1413	1460	1514
40°	1377	1441	1517
45°	1343	1427	1525
50°	1305	1420	1539
55°	1265	1418	1567
60°	1216	1424	1608
65°	1152	1446	1677
70°	1070	1482	1773
75°	976	1556	1923
80°	803	1675	1922
85°	614	1545	1652



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	108.3	3.2
10°-20°	309.1	9.1
20°-30°	465.2	13.6
30°-40°	557.5	16.3
40°-50°	580.9	17.0
50°-60°	540.5	15.9
60°-70°	445.2	13.1
70°-80°	303.2	8.9
80°-90°	100.1	2.9
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°	882.6	25.9
0°-40°	1440.0	42.2
0°-60°	2561.5	75.1
0°-90°	3409.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3409.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1145	1145	1145	1145	1145	
5°	1140	1140	1136	1141	1143	108
15°	1090	1091	1092	1103	1104	307
25°	992	997	1007	1024	1028	457
35°	860	871	889	913	922	538
45°	706	720	750	788	801	544
55°	539	558	604	652	668	481
65°	362	393	454	508	527	359
75°	188	230	299	353	370	198
85°	40	77	100	107	107	49
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1144.9	1144.9	1144.9	1144.9	1144.9
2.5°	1144.9	1144.9	1139.2	1144.9	1144.9
5°	1140.3	1140.3	1135.8	1141.4	1142.6
7.5°	1132.3	1133.5	1128.9	1135.8	1136.9
10°	1121.0	1122.1	1119.8	1126.7	1127.8
12.5°	1107.3	1108.4	1108.4	1116.4	1117.5
15°	1090.2	1091.4	1092.5	1102.8	1103.9
17.5°	1068.6	1072.0	1074.3	1086.8	1089.1
20°	1045.9	1049.3	1053.8	1067.5	1069.8
22.5°	1019.7	1024.2	1032.2	1047.0	1050.4
25°	992.4	996.9	1007.2	1024.2	1027.6
27.5°	961.6	968.5	981.0	999.2	1003.7
30°	929.8	936.6	951.4	970.7	977.6
32.5°	895.6	904.7	921.8	943.4	950.3
35°	860.4	870.6	888.8	912.7	921.8
37.5°	822.8	834.2	855.8	882.0	893.4
40°	784.1	797.8	820.5	851.2	863.8
42.5°	745.4	757.9	786.4	819.4	833.0
45°	705.6	720.4	750.0	787.5	801.2
47.5°	664.6	679.4	714.7	754.5	767.0
50°	623.6	638.4	678.3	720.4	735.2
52.5°	579.3	598.6	644.1	686.2	701.0
55°	539.4	557.6	604.3	652.1	668.0
57.5°	493.9	515.5	566.7	616.8	633.9
60°	451.8	474.6	529.2	580.4	597.5
62.5°	408.6	433.6	491.6	544.0	563.3
65°	361.9	392.6	454.1	507.6	526.9
67.5°	319.8	351.7	416.5	471.1	488.2
70°	272.0	310.7	376.7	431.3	450.7
72.5°	231.0	269.7	339.1	392.6	412.0
75°	187.8	229.9	299.3	352.8	369.9
77.5°	144.5	191.2	260.6	301.6	307.3
80°	103.6	152.5	216.2	240.1	248.1
82.5°	72.8	117.2	159.3	175.3	179.8
85°	39.8	77.4	100.1	107.0	107.0
87.5°	17.1	33.0	39.8	41.0	42.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)