

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: P388755

Luminaire Tested: **24CZ2-30VHE-UNV-L940-CD1-SDWPD1-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: P388755  
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: 24CZ2-30VHE-UNV-L940-CD1-SDWPD1-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: 2509.5 lumens  
Efficiency: N/A  
Efficacy: 123.0 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

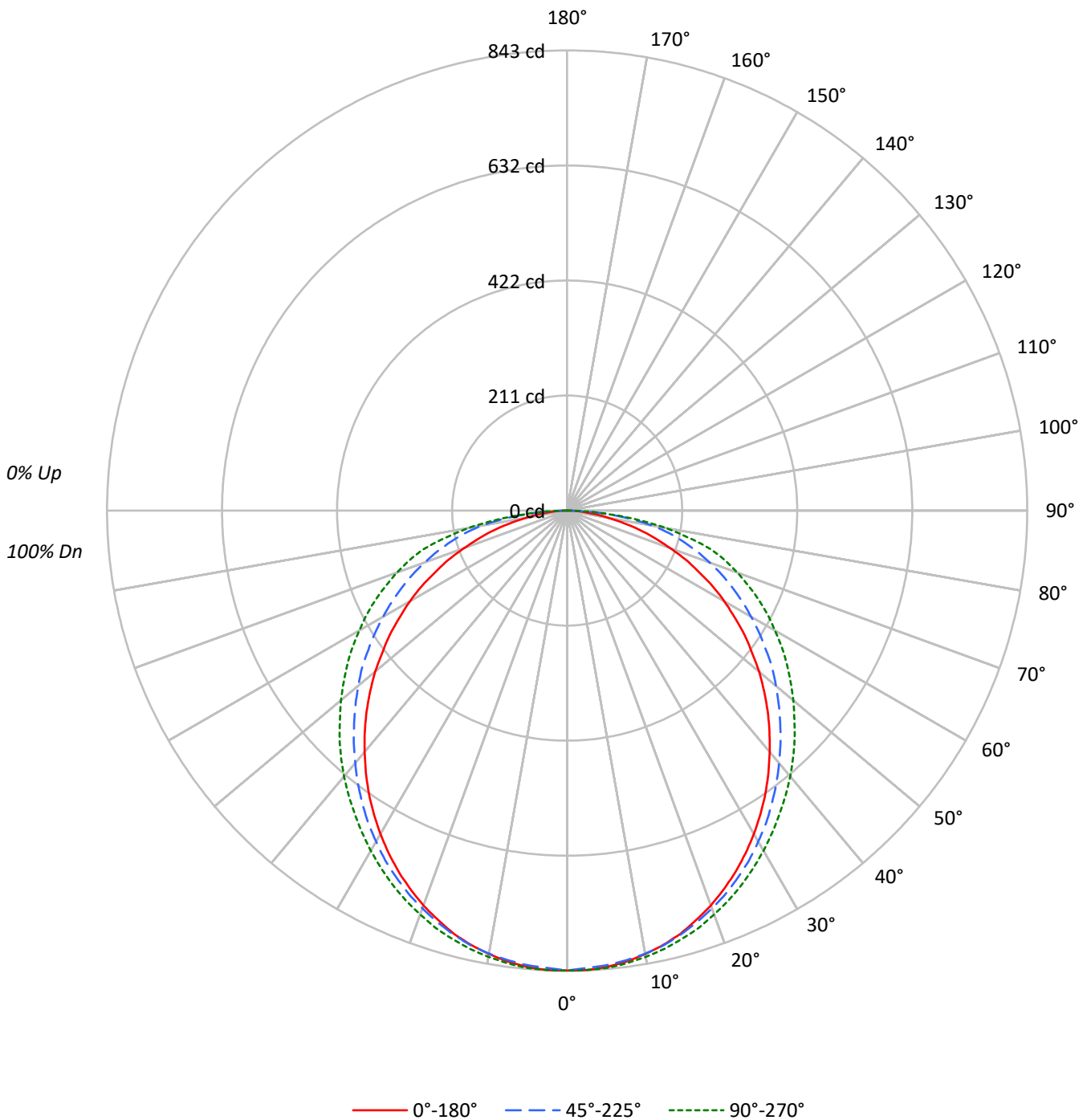
Input Watts (W): 20.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1134	1134	1134
5°	1133	1129	1136
10°	1127	1126	1134
15°	1118	1120	1132
20°	1102	1111	1127
25°	1084	1100	1123
30°	1063	1088	1118
35°	1040	1074	1114
40°	1014	1061	1117
45°	988	1050	1122
50°	961	1045	1132
55°	931	1043	1153
60°	895	1048	1183
65°	848	1064	1235
70°	788	1090	1305
75°	718	1145	1415
80°	590	1233	1415
85°	452	1138	1215



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.7	3.2
10°-20°	227.5	9.1
20°-30°	342.3	13.6
30°-40°	410.3	16.3
40°-50°	427.5	17.0
50°-60°	397.8	15.9
60°-70°	327.6	13.1
70°-80°	223.1	8.9
80°-90°	73.7	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°	649.5	25.9
0°-40°	1059.8	42.2
0°-60°	1885.1	75.1
0°-90°	2509.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2509.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	843	843	843	843	843	
5°	839	839	836	840	841	80
15°	802	803	804	812	812	226
25°	730	734	741	754	756	336
35°	633	641	654	672	678	396
45°	519	530	552	580	590	401
55°	397	410	445	480	492	354
65°	266	289	334	374	388	264
75°	138	169	220	260	272	146
85°	29	57	74	79	79	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	842.6	842.6	842.6	842.6	842.6
2.5°	842.6	842.6	838.4	842.6	842.6
5°	839.2	839.2	835.9	840.0	840.9
7.5°	833.3	834.2	830.8	835.9	836.7
10°	825.0	825.8	824.1	829.2	830.0
12.5°	814.9	815.8	815.8	821.6	822.5
15°	802.4	803.2	804.0	811.6	812.4
17.5°	786.4	789.0	790.6	799.8	801.5
20°	769.7	772.2	775.6	785.6	787.3
22.5°	750.4	753.8	759.6	770.5	773.0
25°	730.3	733.7	741.2	753.8	756.3
27.5°	707.7	712.7	722.0	735.4	738.7
30°	684.3	689.3	700.2	714.4	719.4
32.5°	659.1	665.8	678.4	694.3	699.3
35°	633.2	640.7	654.1	671.7	678.4
37.5°	605.5	613.9	629.8	649.1	657.5
40°	577.1	587.1	603.9	626.5	635.7
42.5°	548.6	557.8	578.7	603.0	613.1
45°	519.3	530.2	551.9	579.6	589.6
47.5°	489.1	500.0	526.0	555.3	564.5
50°	459.0	469.9	499.2	530.2	541.0
52.5°	426.3	440.5	474.0	505.0	515.9
55°	397.0	410.4	444.7	479.9	491.6
57.5°	363.5	379.4	417.1	453.9	466.5
60°	332.5	349.3	389.5	427.1	439.7
62.5°	300.7	319.1	361.8	400.3	414.6
65°	266.3	288.9	334.2	373.5	387.8
67.5°	235.3	258.8	306.5	346.7	359.3
70°	200.2	228.6	277.2	317.4	331.7
72.5°	170.0	198.5	249.6	288.9	303.2
75°	138.2	169.2	220.3	259.6	272.2
77.5°	106.4	140.7	191.8	221.9	226.1
80°	76.2	112.2	159.1	176.7	182.6
82.5°	53.6	86.3	117.3	129.0	132.3
85°	29.3	57.0	73.7	78.7	78.7
87.5°	12.6	24.3	29.3	30.2	31.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)