

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: P388519

Luminaire Tested: **24CZ2-30VHE-SQR-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: P388519
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-30VHE-SQR-UNV-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2439.5 lumens
Efficiency: N/A
Efficacy: 119.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

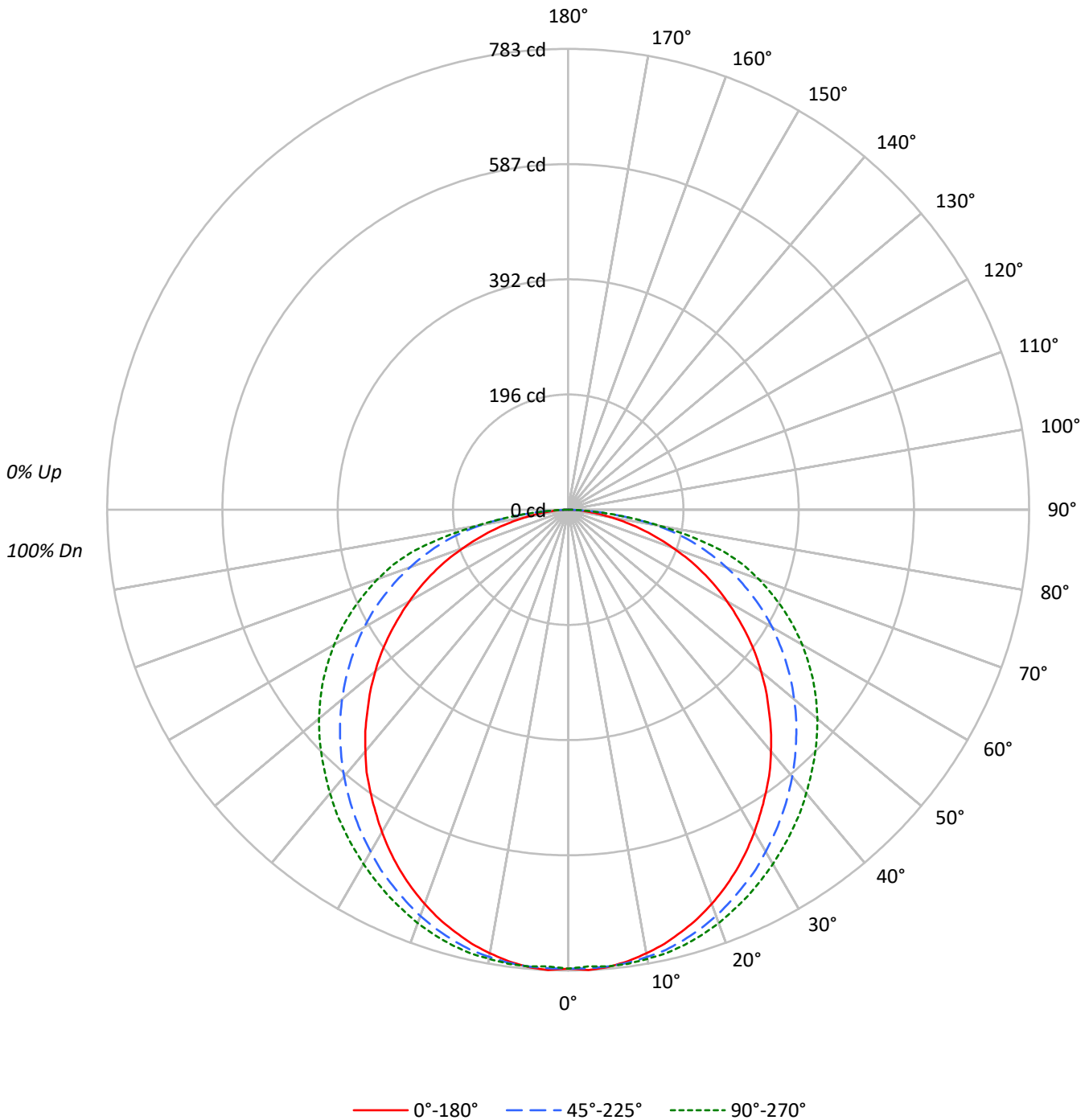
Input Watts (W): 20.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1049	1049	1049
5°	1053	1052	1052
10°	1046	1054	1059
15°	1035	1055	1066
20°	1021	1052	1070
25°	1003	1046	1074
30°	983	1042	1080
35°	962	1040	1090
40°	941	1040	1105
45°	917	1042	1127
50°	895	1049	1157
55°	869	1060	1192
60°	839	1077	1236
65°	803	1098	1287
70°	745	1125	1353
75°	674	1164	1416
80°	568	1167	1217
85°	435	883	883



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.0	3.0
10°-20°	213.0	8.7
20°-30°	323.5	13.3
30°-40°	393.5	16.1
40°-50°	418.9	17.2
50°-60°	399.0	16.4
60°-70°	333.7	13.7
70°-80°	222.5	9.1
80°-90°	61.6	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°	610.5	25.0
0°-40°	1003.9	41.2
0°-60°	1821.8	74.7
0°-90°	2439.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2439.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	780	780	780	780	780	
5°	780	775	779	779	779	74
15°	743	744	757	763	765	209
25°	676	685	705	717	723	311
35°	586	603	633	654	664	366
45°	482	508	548	578	592	372
55°	371	403	452	491	508	331
65°	252	289	345	388	404	249
75°	130	171	224	262	272	137
85°	28	52	57	56	57	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	779.8	779.8	779.8	779.8	779.8
2.5°	783.0	777.4	779.8	779.8	776.6
5°	779.8	774.9	779.0	779.0	779.0
7.5°	774.1	770.1	776.6	778.2	778.2
10°	765.3	763.7	771.7	774.1	774.9
12.5°	755.6	754.8	766.1	769.3	771.7
15°	742.7	744.3	757.2	762.9	765.3
17.5°	729.0	732.3	746.8	754.8	757.2
20°	712.9	717.8	734.7	742.7	747.6
22.5°	695.2	702.4	720.2	729.8	735.5
25°	675.9	684.7	704.9	716.9	723.4
27.5°	654.9	666.2	689.6	703.3	709.7
30°	632.4	645.3	671.0	687.1	695.2
32.5°	609.0	624.3	652.5	670.2	679.9
35°	585.6	602.6	633.2	654.1	663.8
37.5°	562.3	579.2	613.0	635.6	647.7
40°	535.7	555.8	592.1	617.1	629.1
42.5°	509.9	531.7	570.3	597.7	610.6
45°	481.7	507.5	547.8	578.4	592.1
47.5°	455.9	481.7	525.2	557.4	572.8
50°	427.8	455.1	501.1	536.5	552.6
52.5°	400.4	428.6	476.9	514.8	530.9
55°	370.6	402.8	451.9	491.4	508.3
57.5°	340.8	375.4	426.1	467.2	484.1
60°	311.8	347.2	400.4	441.4	459.2
62.5°	282.8	318.2	373.8	415.7	432.6
65°	252.1	289.2	344.8	387.5	404.4
67.5°	221.5	260.2	315.8	358.5	374.6
70°	189.3	230.4	286.0	327.9	344.0
72.5°	159.5	200.6	255.4	296.4	311.8
75°	129.7	170.8	223.9	261.8	272.3
77.5°	100.7	141.8	189.3	214.3	216.7
80°	73.3	112.0	150.6	157.9	157.1
82.5°	49.1	83.8	103.9	104.7	107.1
85°	28.2	52.4	57.2	56.4	57.2
87.5°	11.3	18.5	16.1	12.1	12.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)