Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

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: P389160

Luminaire Tested: **24CZ2-85VHE-SQR-UNV-L930-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.

Report Generated By E9911574 / USPTCWHP6081592

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Scaled Data Report

Test Information

Test Method:	LM-79-08
Report Number:	P389160
	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:	24CZ2-85VHE-SQR-UNV-L930-CD1-SDWPD1-U
Description:	2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS
Light Source:	-
Ballast/Driver:	-

Luminaire Equipment:	Sample No.	Condition	Description

Summary

Lumens per Lamp:	N/A
Luminaire Lumens:	6648.8 lumens
Efficiency:	N/A
Efficacy:	114.8 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):	57.9
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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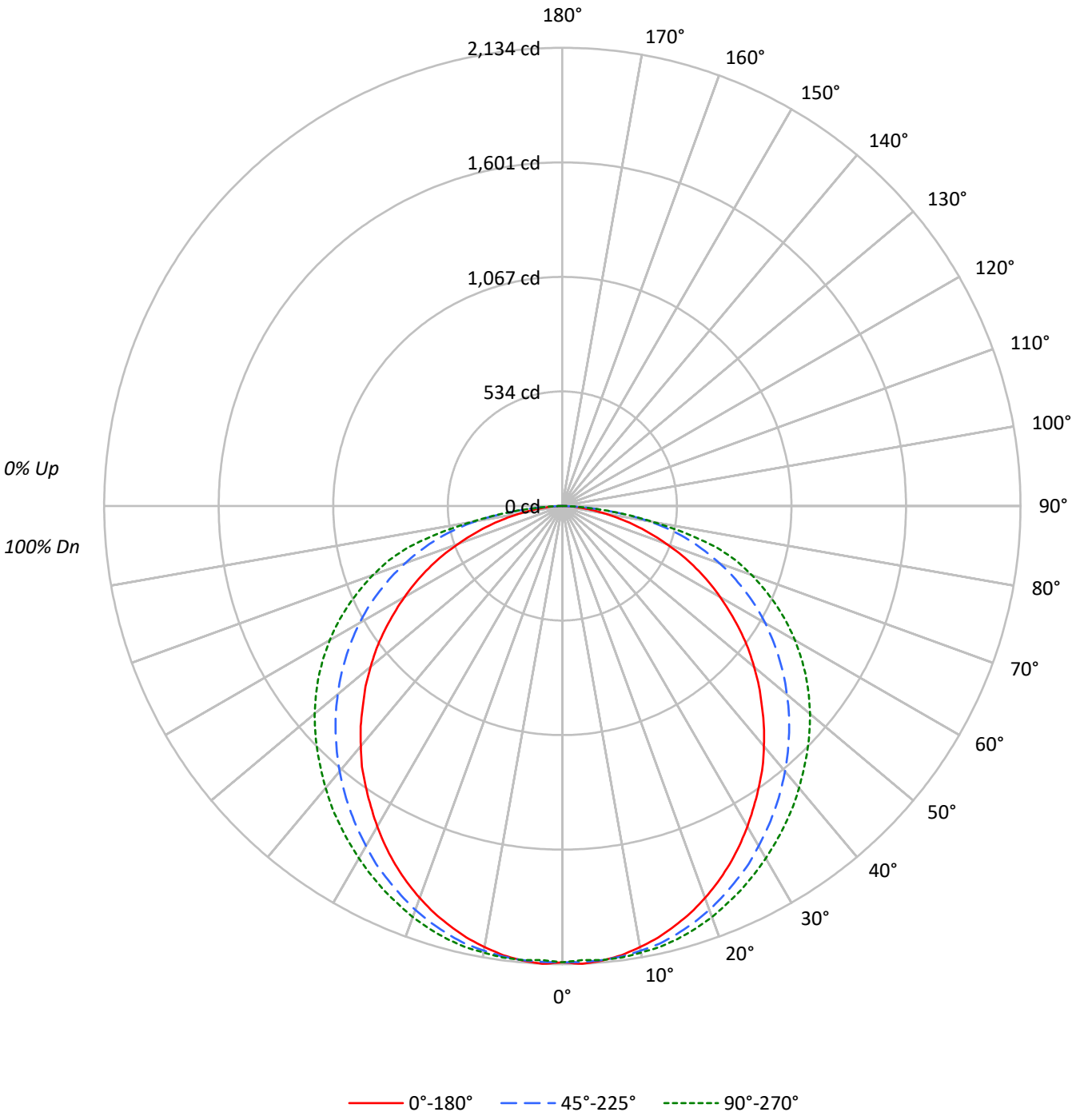
Luminous Intensity Polar Plot



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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°	2860	2860	2860
5°	2870	2868	2868
10°	2850	2874	2886
15°	2820	2875	2905
20°	2782	2867	2917
25°	2735	2852	2927
30°	2678	2841	2944
35°	2622	2835	2972
40°	2564	2834	3012
45°	2498	2841	3071
50°	2440	2858	3153
55°	2369	2889	3250
60°	2287	2936	3368
65°	2188	2992	3509
70°	2030	3066	3688
75°	1838	3173	3858
80°	1548	3181	3317
85°	1186	2407	2407

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	201.7	3.0
10°-20°	580.4	8.7
20°-30°	881.6	13.3
30°-40°	1072.4	16.1
40°-50°	1141.7	17.2
50°-60°	1087.4	16.4
60°-70°	909.4	13.7
70°-80°	606.3	9.1
80°-90°	167.8	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°	1663.8	25.0
0°-40°	2736.2	41.2
0°-60°	4965.3	74.7
0°-90°	6648.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6648.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2125	2125	2125	2125	2125	
5°	2125	2112	2123	2123	2123	202
15°	2024	2029	2064	2079	2086	571
25°	1842	1866	1921	1954	1972	848
35°	1596	1642	1726	1783	1809	999
45°	1313	1383	1493	1576	1614	1015
55°	1010	1098	1232	1339	1385	903
65°	687	788	940	1056	1102	679
75°	354	466	610	714	742	374
85°	77	143	156	154	156	93
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	*2125.3*	2125.3	2125.3	2125.3	2125.3
2.5°	*2134.1*	*2118.7*	*2125.3*	*2125.3*	*2116.5*
5°	*2125.3*	2112.1	2123.1	2123.1	2123.1
7.5°	*2109.9*	2098.9	2116.5	2120.9	2120.9
10°	*2085.8*	2081.4	2103.3	2109.9	2112.1
12.5°	*2059.4*	2057.2	2088.0	2096.7	2103.3
15°	*2024.3*	2028.7	2063.8	2079.2	2085.8
17.5°	*1987.0*	1995.7	2035.3	2057.2	2063.8
20°	*1943.1*	1956.2	2002.3	2024.3	2037.5
22.5°	*1894.7*	1914.5	1962.8	1989.2	2004.5
25°	*1842.1*	1866.2	1921.1	1954.0	1971.6
27.5°	*1785.0*	1815.7	1879.4	1916.7	1934.3
30°	*1723.5*	1758.6	1828.9	1872.8	1894.7
32.5°	*1659.8*	1701.5	1778.4	1826.7	1853.0
35°	*1596.2*	1642.3	1725.7	1782.8	1809.1
37.5°	*1532.5*	1578.6	1670.8	1732.3	1765.2
40°	*1460.0*	1514.9	1613.7	1681.8	1714.7
42.5°	*1389.8*	1449.1	1554.4	1629.1	1664.2
45°	*1312.9*	1383.2	1493.0	1576.4	1613.7
47.5°	*1242.7*	1312.9	1431.5	1519.3	1561.0
50°	*1165.8*	1240.5	1365.6	1462.2	1506.1
52.5°	*1091.2*	1168.0	1299.8	1402.9	1446.9
55°	*1009.9*	1097.8	1231.7	1339.3	1385.4
57.5°	*928.7*	1023.1	1161.4	1273.4	1319.5
60°	*849.7*	946.3	1091.2	1203.2	1251.5
62.5°	*770.6*	867.2	1018.7	1132.9	1179.0
65°	*687.2*	788.2	939.7	1056.1	1102.2
67.5°	*603.8*	709.2	860.7	977.0	1020.9
70°	*516.0*	627.9	779.4	893.6	937.5
72.5°	*434.7*	546.7	696.0	808.0	849.7
75°	*353.5*	465.5	610.4	713.5	742.1
77.5°	*274.4*	386.4	516.0	584.0	590.6
80°	*199.8*	305.2	410.6	430.3	428.1
82.5°	*133.9*	228.3	283.2	285.4	292.0
85°	*76.8*	142.7	155.9	153.7	155.9
87.5°	*30.7*	50.5	43.9	32.9	32.9
90°	*0.0*	0.0	0.0	0.0	0.0

(END OF REPORT)