

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: P389163

Luminaire Tested: **24CZ2-85VHE-SQR-UNV-L935-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: P389163
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-L935-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6813.2 lumens
Efficiency: N/A
Efficacy: 117.7 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

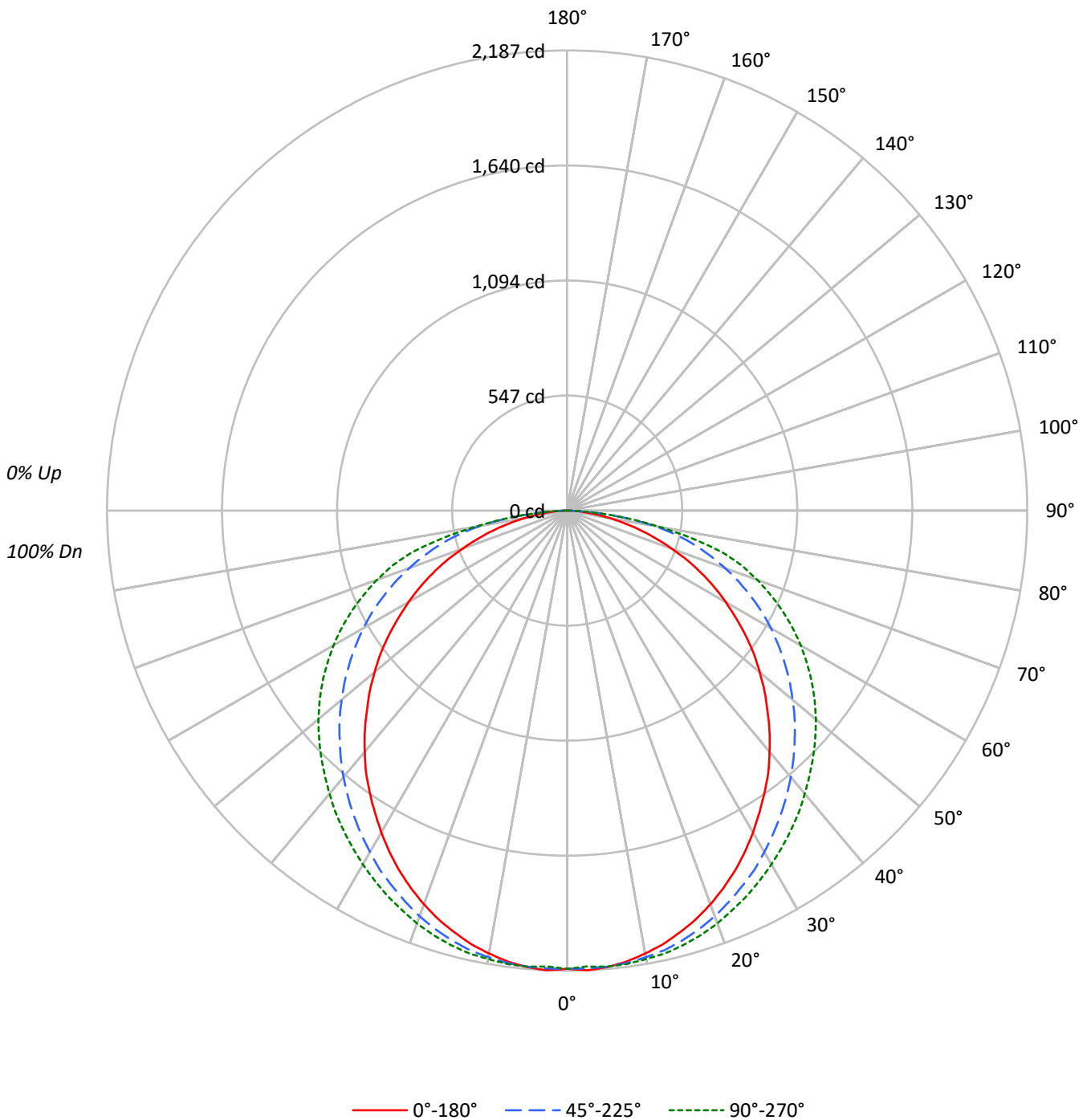
Input Watts (W): 57.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
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	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					100			
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82					82			
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67					67			
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47					47			
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41					41			
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35					35			
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28					28			
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25					25			
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22					22			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2930	2930	2930
5°	2941	2938	2938
10°	2920	2945	2957
15°	2889	2946	2977
20°	2851	2938	2989
25°	2802	2923	2999
30°	2744	2912	3017
35°	2687	2905	3045
40°	2628	2904	3086
45°	2560	2911	3146
50°	2501	2929	3231
55°	2428	2961	3330
60°	2343	3009	3451
65°	2242	3066	3596
70°	2080	3142	3779
75°	1883	3252	3953
80°	1586	3260	3399
85°	1215	2465	2465



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	206.7	3.0
10°-20°	594.8	8.7
20°-30°	903.4	13.3
30°-40°	1098.9	16.1
40°-50°	1170.0	17.2
50°-60°	1114.3	16.4
60°-70°	931.9	13.7
70°-80°	621.3	9.1
80°-90°	171.9	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°	1704.9	25.0
0°-40°	2803.8	41.2
0°-60°	5088.1	74.7
0°-90°	6813.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6813.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2178	2178	2178	2178	2178	
5°	2178	2164	2176	2176	2176	207
15°	2074	2079	2115	2131	2137	585
25°	1888	1912	1969	2002	2020	869
35°	1636	1683	1768	1827	1854	1024
45°	1345	1417	1530	1615	1654	1040
55°	1035	1125	1262	1372	1420	925
65°	704	808	963	1082	1129	696
75°	362	477	626	731	760	384
85°	79	146	160	158	160	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2177.8	2177.8	2177.8	2177.8	2177.8
2.5°	2186.8	2171.1	2177.8	2177.8	2168.8
5°	2177.8	2164.3	2175.6	2175.6	2175.6
7.5°	2162.1	2150.8	2168.8	2173.3	2173.3
10°	2137.3	2132.8	2155.3	2162.1	2164.3
12.5°	2110.3	2108.1	2139.6	2148.6	2155.3
15°	2074.3	2078.8	2114.8	2130.6	2137.3
17.5°	2036.1	2045.1	2085.6	2108.1	2114.8
20°	1991.1	2004.6	2051.8	2074.3	2087.8
22.5°	1941.6	1961.8	2011.3	2038.3	2054.1
25°	1887.6	1912.4	1968.6	2002.3	2020.3
27.5°	1829.1	1860.6	1925.8	1964.1	1982.1
30°	1766.1	1802.1	1874.1	1919.1	1941.6
32.5°	1700.9	1743.6	1822.4	1871.9	1898.9
35°	1635.6	1682.9	1768.4	1826.9	1853.9
37.5°	1570.4	1617.6	1712.1	1775.1	1808.9
40°	1496.1	1552.4	1653.6	1723.4	1757.1
42.5°	1424.1	1484.9	1592.9	1669.4	1705.4
45°	1345.4	1417.4	1529.9	1615.4	1653.6
47.5°	1273.4	1345.4	1466.9	1556.9	1599.6
50°	1194.7	1271.2	1399.4	1498.4	1543.4
52.5°	1118.2	1196.9	1331.9	1437.6	1482.6
55°	1034.9	1124.9	1262.2	1372.4	1419.6
57.5°	951.7	1048.4	1190.2	1304.9	1352.1
60°	870.7	969.7	1118.2	1232.9	1282.4
62.5°	789.7	888.7	1043.9	1160.9	1208.2
65°	704.2	807.7	962.9	1082.2	1129.4
67.5°	618.7	726.7	881.9	1001.2	1046.2
70°	528.7	643.4	798.7	915.7	960.7
72.5°	445.5	560.2	713.2	827.9	870.7
75°	362.2	477.0	625.5	731.2	760.4
77.5°	281.2	396.0	528.7	598.5	605.2
80°	204.7	312.7	420.7	441.0	438.7
82.5°	137.2	234.0	290.2	292.5	299.2
85°	78.7	146.2	159.7	157.5	159.7
87.5°	31.5	51.7	45.0	33.7	33.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)