

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: P389167

Luminaire Tested: **24CZ2-85VHE-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: P389167
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-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: 6967.8 lumens
Efficiency: N/A
Efficacy: 120.3 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

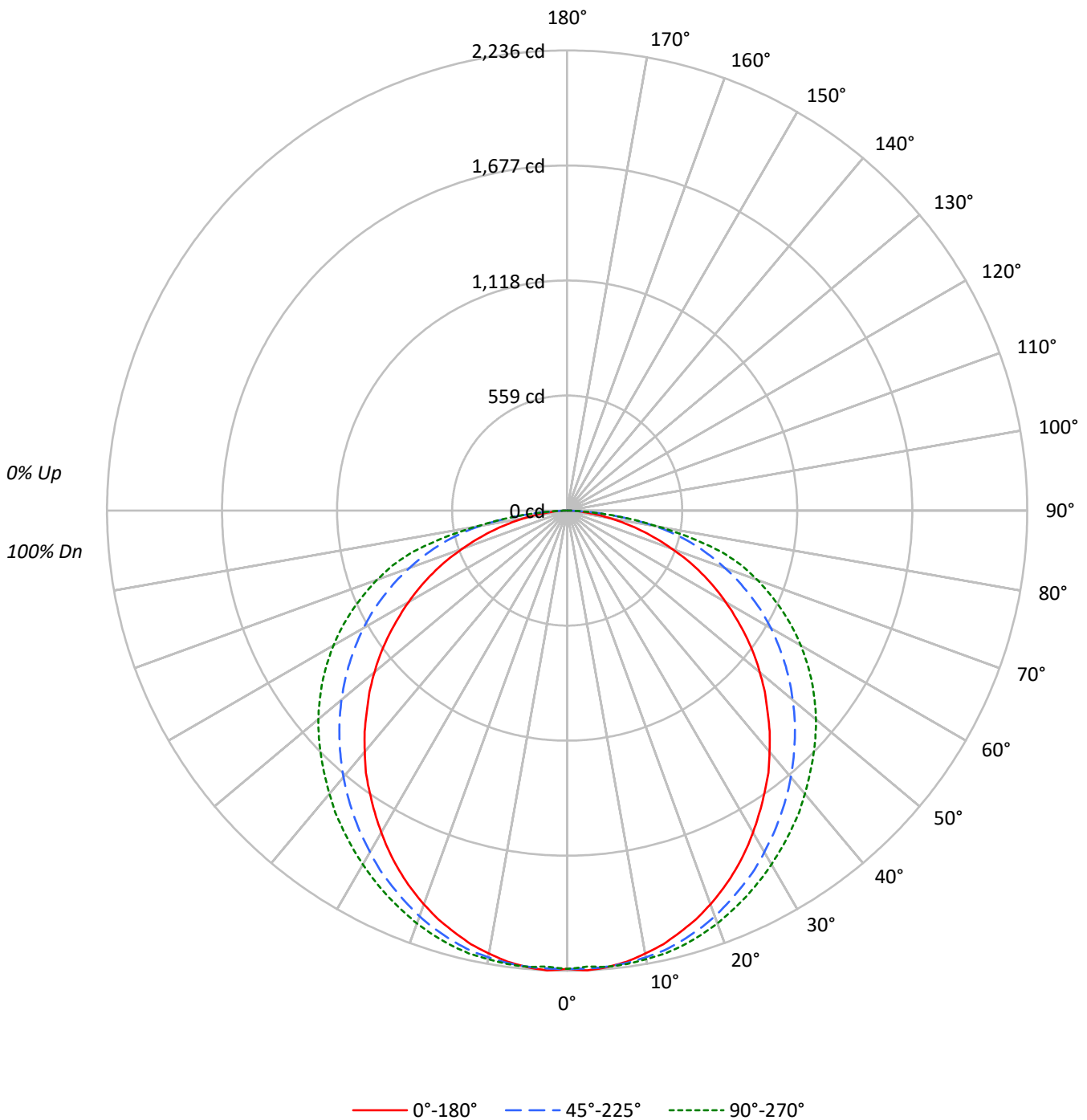
Input Watts (W): 57.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2997	2997	2997
5°	3008	3005	3005
10°	2986	3011	3024
15°	2955	3013	3045
20°	2916	3005	3057
25°	2866	2989	3067
30°	2806	2978	3085
35°	2747	2971	3114
40°	2687	2970	3156
45°	2618	2977	3218
50°	2557	2996	3304
55°	2483	3028	3406
60°	2396	3077	3529
65°	2293	3135	3677
70°	2127	3213	3865
75°	1926	3325	4043
80°	1623	3334	3477
85°	1243	2523	2523



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.4	3.0
10°-20°	608.3	8.7
20°-30°	923.9	13.3
30°-40°	1123.8	16.1
40°-50°	1196.5	17.2
50°-60°	1139.6	16.4
60°-70°	953.0	13.7
70°-80°	635.4	9.1
80°-90°	175.8	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°	1743.6	25.0
0°-40°	2867.4	41.2
0°-60°	5203.5	74.7
0°-90°	6967.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6967.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2227	2227	2227	2227	2227	
5°	2227	2213	2225	2225	2225	211
15°	2121	2126	2163	2179	2186	598
25°	1930	1956	2013	2048	2066	889
35°	1673	1721	1808	1868	1896	1047
45°	1376	1450	1565	1652	1691	1064
55°	1058	1150	1291	1404	1452	946
65°	720	826	985	1107	1155	711
75°	370	488	640	748	778	392
85°	80	150	163	161	163	97
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2227.2	2227.2	2227.2	2227.2	2227.2
2.5°	2236.5	2220.3	2227.2	2227.2	2218.0
5°	2227.2	2213.4	2224.9	2224.9	2224.9
7.5°	2211.1	2199.6	2218.0	2222.6	2222.6
10°	2185.8	2181.2	2204.2	2211.1	2213.4
12.5°	2158.2	2155.9	2188.1	2197.3	2204.2
15°	2121.4	2126.0	2162.8	2178.9	2185.8
17.5°	2082.3	2091.5	2132.9	2155.9	2162.8
20°	2036.3	2050.1	2098.4	2121.4	2135.2
22.5°	1985.7	2006.4	2057.0	2084.6	2100.7
25°	1930.4	1955.7	2013.3	2047.8	2066.2
27.5°	1870.6	1902.8	1969.5	2008.7	2027.1
30°	1806.2	1843.0	1916.6	1962.6	1985.7
32.5°	1739.5	1783.2	1863.7	1914.3	1941.9
35°	1672.7	1721.1	1808.5	1868.3	1895.9
37.5°	1606.0	1654.3	1751.0	1815.4	1849.9
40°	1530.1	1587.6	1691.1	1762.5	1797.0
42.5°	1456.5	1518.6	1629.0	1707.2	1744.1
45°	1375.9	1449.6	1564.6	1652.0	1691.1
47.5°	1302.3	1375.9	1500.2	1592.2	1635.9
50°	1221.8	1300.0	1431.1	1532.4	1578.4
52.5°	1143.5	1224.1	1362.1	1470.3	1516.3
55°	1058.4	1150.4	1290.8	1403.5	1451.9
57.5°	973.3	1072.2	1217.2	1334.5	1382.8
60°	890.4	991.7	1143.5	1260.9	1311.5
62.5°	807.6	908.8	1067.6	1187.3	1235.6
65°	720.2	826.0	984.8	1106.7	1155.0
67.5°	632.7	743.2	901.9	1023.9	1069.9
70°	540.7	658.1	816.8	936.5	982.5
72.5°	455.6	572.9	729.4	846.7	890.4
75°	370.4	487.8	639.6	747.8	777.7
77.5°	287.6	405.0	540.7	612.0	618.9
80°	209.4	319.8	430.3	451.0	448.7
82.5°	140.4	239.3	296.8	299.1	306.0
85°	80.5	149.6	163.4	161.1	163.4
87.5°	32.2	52.9	46.0	34.5	34.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)