

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: P389858

Luminaire Tested: **24CZ2-65VHE-S-UNV-L935-CD1-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: P389858
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-65VHE-S-UNV-L935-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5832.2 lumens
Efficiency: N/A
Efficacy: 138.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

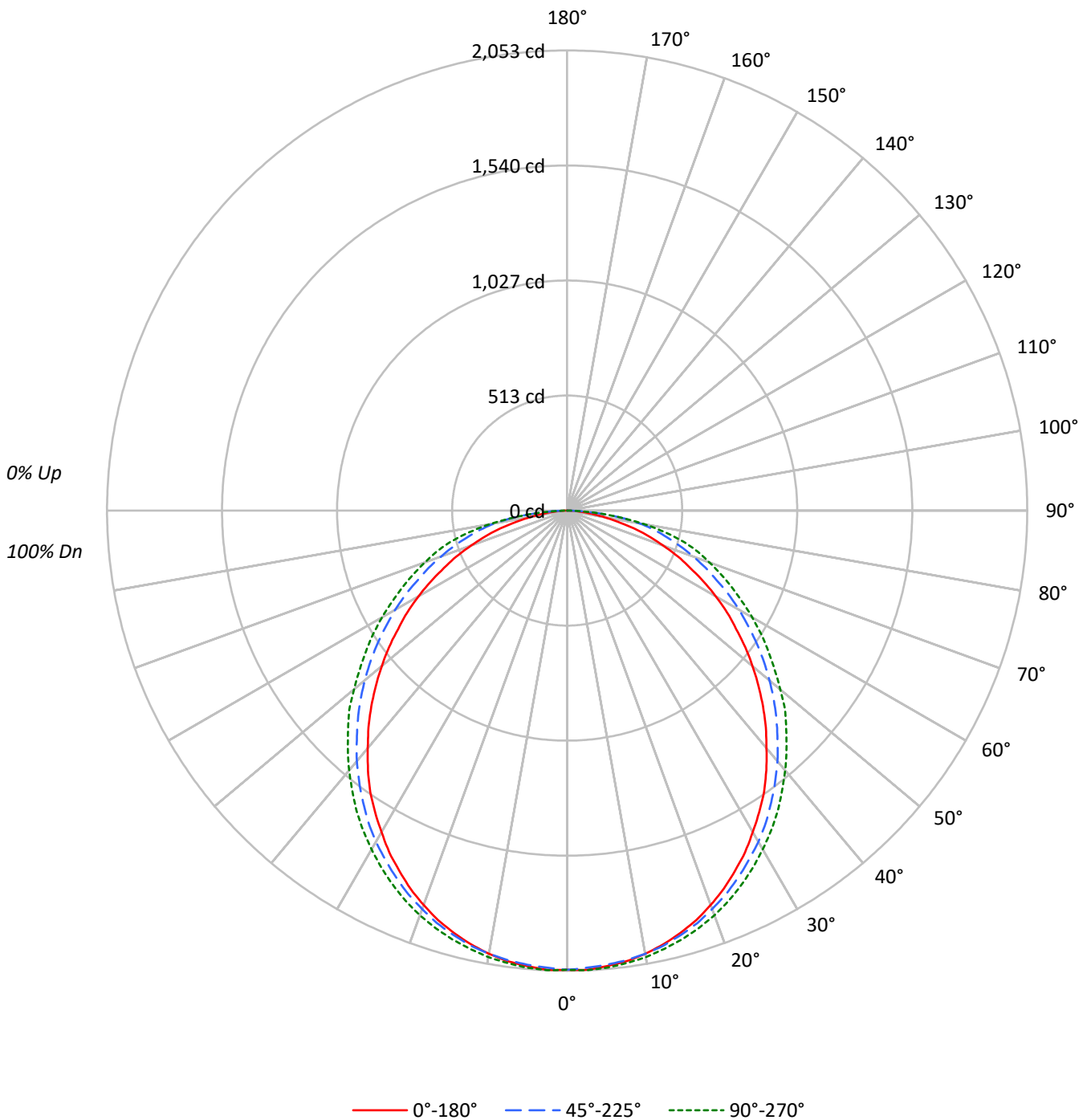
Input Watts (W): 42.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P389858

CATALOG NUMBER: 24CZ2-65VHE-S-UNV-L935-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P389858

CATALOG NUMBER: 24CZ2-65VHE-S-UNV-L935-CD1-U

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	99	95	106	101	97	93	97	93	90		93	90	88		89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2757	2757	2757
5°	2755	2747	2765
10°	2744	2744	2764
15°	2717	2730	2758
20°	2682	2708	2751
25°	2632	2681	2734
30°	2573	2651	2711
35°	2516	2608	2690
40°	2431	2564	2658
45°	2351	2513	2630
50°	2261	2466	2598
55°	2160	2421	2573
60°	2059	2383	2567
65°	1929	2342	2583
70°	1786	2354	2653
75°	1599	2398	2803
80°	1292	2541	2741
85°	973	2231	2174



TEST NUMBER: P389858

CATALOG NUMBER: 24CZ2-65VHE-S-UNV-L935-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.0	3.3
10°-20°	554.2	9.5
20°-30°	833.1	14.3
30°-40°	992.4	17.0
40°-50°	1015.7	17.4
50°-60°	914.4	15.7
60°-70°	718.1	12.3
70°-80°	466.1	8.0
80°-90°	144.1	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°	1581.4	27.1
0°-40°	2573.8	44.1
0°-60°	4503.9	77.2
0°-90°	5832.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5832.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2049	2049	2049	2049	2049	
5°	2040	2043	2034	2045	2047	194
15°	1951	1956	1960	1977	1980	550
25°	1773	1788	1806	1836	1841	817
35°	1532	1551	1588	1626	1638	956
45°	1236	1265	1321	1371	1382	953
55°	921	962	1032	1086	1097	825
65°	606	652	736	797	811	603
75°	308	367	461	524	539	325
85°	63	117	144	141	141	76
90°	0	0	0	0	0	



TEST NUMBER: P389858

CATALOG NUMBER: 24CZ2-65VHE-S-UNV-L935-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2048.9	2048.9	2048.9	2048.9	2048.9
2.5°	2050.7	2050.7	2041.5	2050.7	2052.6
5°	2039.6	2043.3	2034.1	2045.2	2047.0
7.5°	2028.5	2028.5	2023.0	2034.1	2035.9
10°	2008.1	2010.0	2008.1	2021.1	2023.0
12.5°	1982.2	1985.9	1987.8	2000.7	2002.6
15°	1950.7	1956.3	1960.0	1976.6	1980.3
17.5°	1915.5	1921.1	1930.3	1948.9	1952.6
20°	1872.9	1880.3	1891.4	1915.5	1921.1
22.5°	1826.6	1834.0	1852.5	1874.8	1884.0
25°	1772.9	1787.7	1806.2	1835.8	1841.4
27.5°	1719.1	1732.1	1756.2	1787.7	1795.1
30°	1656.2	1676.5	1706.2	1737.7	1745.1
32.5°	1595.0	1615.4	1650.6	1683.9	1693.2
35°	1532.0	1550.6	1587.6	1626.5	1637.6
37.5°	1459.8	1483.9	1524.6	1563.5	1574.6
40°	1383.8	1413.5	1459.8	1500.5	1513.5
42.5°	1311.6	1343.1	1389.4	1433.9	1448.7
45°	1235.6	1265.3	1320.8	1370.9	1382.0
47.5°	1157.8	1191.2	1250.5	1300.5	1319.0
50°	1080.0	1115.2	1178.2	1230.1	1241.2
52.5°	1002.2	1039.3	1106.0	1161.5	1167.1
55°	920.7	961.5	1031.9	1085.6	1096.7
57.5°	846.6	881.8	957.8	1013.3	1026.3
60°	765.1	804.0	885.5	937.4	954.0
62.5°	687.3	728.0	813.3	865.1	879.9
65°	605.8	652.1	735.5	796.6	811.4
67.5°	535.4	579.8	668.8	728.0	742.9
70°	453.9	503.9	598.4	659.5	674.3
72.5°	383.5	435.3	529.8	589.1	611.3
75°	307.5	366.8	461.3	524.3	539.1
77.5°	233.4	302.0	398.3	446.5	446.5
80°	166.7	239.0	327.9	350.1	353.8
82.5°	109.3	179.7	242.7	240.8	240.8
85°	63.0	116.7	144.5	140.8	140.8
87.5°	24.1	48.2	51.9	51.9	50.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)