

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: P389859

Luminaire Tested: **24CZ2-65VHE-S-UNV-L940-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: P389859
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-L940-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5749.2 lumens
Efficiency: N/A
Efficacy: 136.2 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

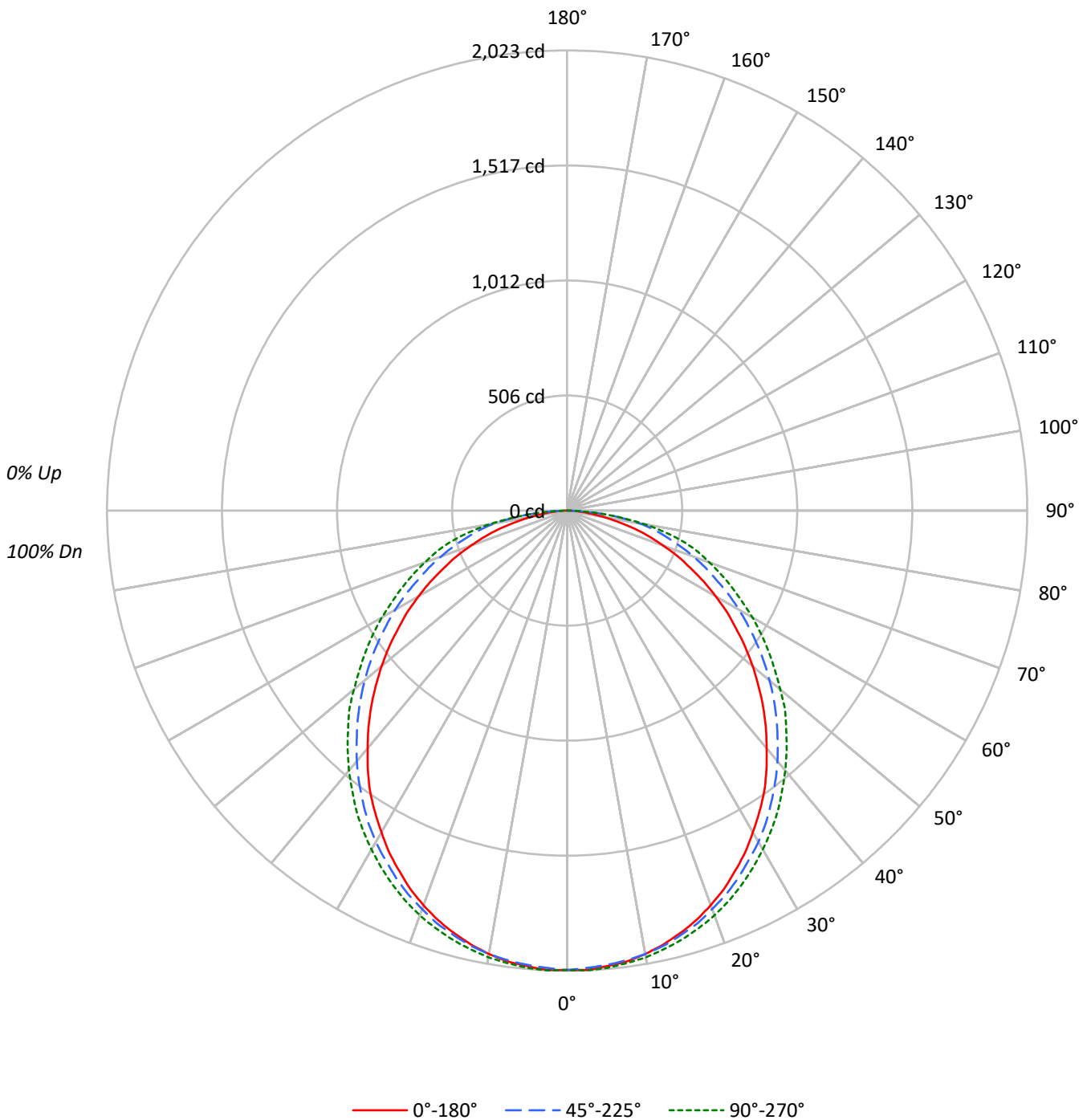
Input Watts (W): 42.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2717	2717	2717
5°	2716	2708	2725
10°	2705	2705	2725
15°	2679	2691	2719
20°	2643	2670	2711
25°	2594	2643	2695
30°	2536	2613	2673
35°	2481	2571	2652
40°	2396	2527	2621
45°	2318	2478	2592
50°	2229	2431	2561
55°	2129	2386	2536
60°	2030	2349	2531
65°	1901	2308	2547
70°	1760	2320	2615
75°	1576	2364	2763
80°	1274	2504	2703
85°	959	2198	2143



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	191.2	3.3
10°-20°	546.4	9.5
20°-30°	821.3	14.3
30°-40°	978.3	17.0
40°-50°	1001.2	17.4
50°-60°	901.4	15.7
60°-70°	707.9	12.3
70°-80°	459.4	8.0
80°-90°	142.1	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°	1558.9	27.1
0°-40°	2537.1	44.1
0°-60°	4439.8	77.2
0°-90°	5749.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5749.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2020	2020	2020	2020	2020	
5°	2011	2014	2005	2016	2018	191
15°	1923	1928	1932	1948	1952	542
25°	1748	1762	1780	1810	1815	805
35°	1510	1528	1565	1603	1614	942
45°	1218	1247	1302	1351	1362	939
55°	908	948	1017	1070	1081	814
65°	597	643	725	785	800	594
75°	303	362	455	517	531	321
85°	62	115	142	139	139	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2019.7	2019.7	2019.7	2019.7	2019.7
2.5°	2021.6	2021.6	2012.4	2021.6	2023.4
5°	2010.6	2014.3	2005.1	2016.1	2017.9
7.5°	1999.6	1999.6	1994.2	2005.1	2006.9
10°	1979.6	1981.4	1979.6	1992.3	1994.2
12.5°	1954.0	1957.6	1959.5	1972.3	1974.1
15°	1922.9	1928.4	1932.1	1948.5	1952.2
17.5°	1888.2	1893.7	1902.9	1921.1	1924.8
20°	1846.2	1853.6	1864.5	1888.2	1893.7
22.5°	1800.6	1807.9	1826.2	1848.1	1857.2
25°	1747.6	1762.2	1780.5	1809.7	1815.2
27.5°	1694.7	1707.5	1731.2	1762.2	1769.5
30°	1632.6	1652.7	1681.9	1712.9	1720.2
32.5°	1572.3	1592.4	1627.1	1660.0	1669.1
35°	1510.2	1528.5	1565.0	1603.4	1614.3
37.5°	1439.0	1462.8	1502.9	1541.3	1552.2
40°	1364.1	1393.4	1439.0	1479.2	1492.0
42.5°	1292.9	1324.0	1369.6	1413.4	1428.1
45°	1218.0	1247.3	1302.1	1351.4	1362.3
47.5°	1141.3	1174.2	1232.7	1282.0	1300.2
50°	1064.7	1099.3	1161.4	1212.6	1223.5
52.5°	988.0	1024.5	1090.2	1145.0	1150.5
55°	907.6	947.8	1017.2	1070.1	1081.1
57.5°	834.6	869.3	944.1	998.9	1011.7
60°	754.2	792.6	872.9	924.0	940.5
62.5°	677.5	717.7	801.7	852.8	867.4
65°	597.2	642.8	725.0	785.2	799.9
67.5°	527.8	571.6	659.2	717.7	732.3
70°	447.4	496.7	589.8	650.1	664.7
72.5°	378.0	429.1	522.3	580.7	602.6
75°	303.1	361.6	454.7	516.8	531.4
77.5°	230.1	297.7	392.6	440.1	440.1
80°	164.4	235.6	323.2	345.1	348.8
82.5°	107.7	177.1	239.2	237.4	237.4
85°	62.1	115.0	142.4	138.8	138.8
87.5°	23.7	47.5	51.1	51.1	49.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)