

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: P389356

Luminaire Tested: **22CZ2-65VHE-S-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: P389356  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-65VHE-S-UNV-L940-CD1-SWPD1-U  
Description: 2x2 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: 5814.1 lumens  
Efficiency: N/A  
Efficacy: 121.4 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

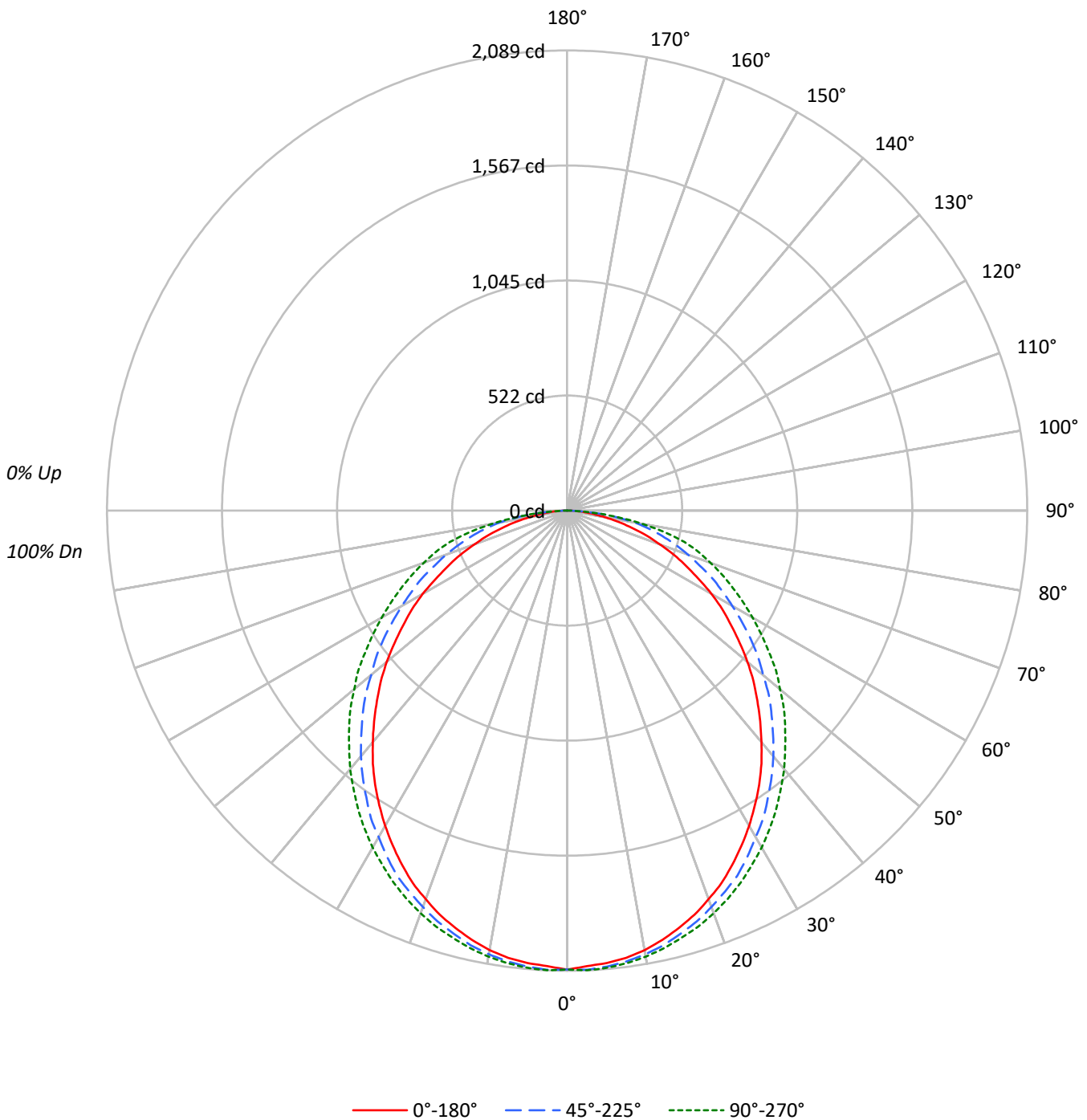
Input Watts (W): 47.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	5606	5606	5606
5°	5569	5613	5628
10°	5537	5589	5619
15°	5464	5539	5592
20°	5376	5485	5570
25°	5268	5429	5533
30°	5133	5319	5487
35°	4990	5222	5436
40°	4822	5117	5384
45°	4646	4997	5327
50°	4474	4860	5281
55°	4264	4773	5243
60°	4074	4658	5227
65°	3800	4629	5286
70°	3500	4589	5442
75°	3159	4654	5726
80°	2732	4793	5380
85°	2260	4020	4020



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	197.0	3.4
10°-20°	560.7	9.6
20°-30°	838.9	14.4
30°-40°	993.5	17.1
40°-50°	1012.5	17.4
50°-60°	907.5	15.6
60°-70°	710.5	12.2
70°-80°	458.1	7.9
80°-90°	135.3	2.3
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°	1596.6	27.5
0°-40°	2590.1	44.5
0°-60°	4510.1	77.6
0°-90°	5814.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5814.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2083	2083	2083	2083	2083	
5°	2062	2067	2078	2081	2083	196
15°	1961	1972	1988	2005	2007	553
25°	1774	1790	1828	1853	1864	817
35°	1519	1538	1590	1638	1655	949
45°	1221	1248	1313	1381	1400	943
55°	909	939	1017	1088	1118	815
65°	597	632	727	798	830	593
75°	304	350	448	524	551	326
85°	73	100	130	130	130	86
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2083.4	2083.4	2083.4	2083.4	2083.4
2.5°	2069.8	2075.2	2086.1	2088.8	2088.8
5°	2061.7	2067.1	2077.9	2080.7	2083.4
7.5°	2048.1	2050.8	2064.4	2069.8	2072.5
10°	2026.4	2031.8	2045.4	2053.5	2056.2
12.5°	1996.6	2004.7	2021.0	2031.8	2034.5
15°	1961.3	1972.2	1988.4	2004.7	2007.4
17.5°	1923.3	1934.2	1955.9	1974.9	1980.3
20°	1877.2	1890.8	1915.2	1936.9	1945.0
22.5°	1831.1	1841.9	1871.8	1898.9	1907.0
25°	1774.1	1790.4	1828.4	1852.8	1863.6
27.5°	1714.4	1733.4	1771.4	1804.0	1814.8
30°	1652.0	1671.0	1711.7	1752.4	1766.0
32.5°	1586.9	1608.6	1657.5	1698.2	1711.7
35°	1519.1	1538.1	1589.7	1638.5	1654.8
37.5°	1448.6	1464.9	1524.6	1576.1	1592.4
40°	1372.6	1394.3	1456.7	1516.4	1532.7
42.5°	1296.7	1321.1	1383.5	1448.6	1464.9
45°	1220.7	1247.9	1313.0	1380.8	1399.8
47.5°	1147.5	1169.2	1242.4	1307.5	1334.7
50°	1068.8	1090.5	1161.0	1234.3	1261.4
52.5°	987.4	1017.3	1093.2	1163.8	1196.3
55°	908.8	938.6	1017.3	1087.8	1117.6
57.5°	835.5	859.9	941.3	1014.6	1044.4
60°	756.9	778.6	865.4	944.0	971.2
62.5°	672.8	705.3	794.8	868.1	900.6
65°	596.8	632.1	727.0	797.5	830.1
67.5°	526.3	558.8	651.1	727.0	762.3
70°	444.9	488.3	583.2	659.2	691.7
72.5°	379.8	417.8	515.4	591.4	626.6
75°	303.8	349.9	447.6	523.6	550.7
77.5°	241.4	287.5	379.8	439.5	453.0
80°	176.3	222.4	309.3	339.1	347.2
82.5°	119.4	162.8	222.4	230.6	233.3
85°	73.2	100.4	130.2	130.2	130.2
87.5°	35.3	40.7	46.1	43.4	43.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)