

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: P276421

Luminaire Tested: **24CZ2-60HE-S-UNV-L93050-W2A1-U-5000K**

Issue Date: 3/3/2020

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: P276421  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-60HE-S-UNV-L93050-W2A1-U-5000K  
Description: CRUZE 2.0 2x4 TUNABLE WHITE LED TROFFER WITH SMOOTH LENS  
Light Source: (336) 90 CRI LEDS TUNED TO 5000K CCT  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

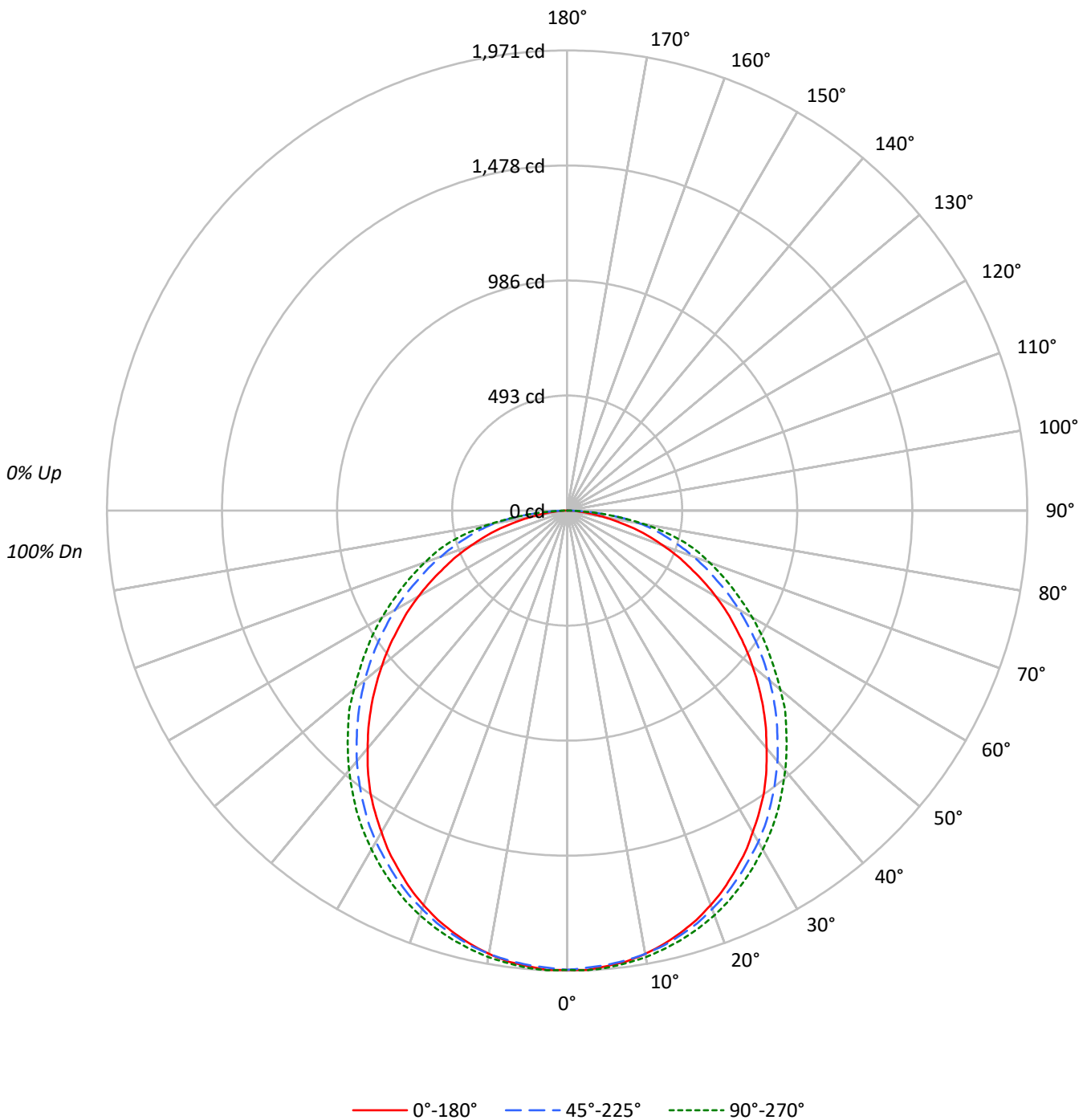
Lumens per Lamp: N/A  
Luminaire Lumens: 5600.0 lumens  
Efficiency: N/A  
Efficacy: 121.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 46.127256  
Input Voltage (V): 120  
Input Current (Ain): 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	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°	2647	2647	2647
5°	2645	2638	2655
10°	2634	2634	2654
15°	2609	2622	2649
20°	2575	2600	2641
25°	2527	2575	2625
30°	2471	2545	2603
35°	2416	2504	2583
40°	2334	2462	2553
45°	2257	2413	2525
50°	2171	2368	2495
55°	2074	2324	2470
60°	1977	2288	2465
65°	1852	2248	2480
70°	1714	2260	2547
75°	1535	2302	2691
80°	1241	2439	2632
85°	934	2141	2087



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	186.2	3.3
10°-20°	532.2	9.5
20°-30°	800.0	14.3
30°-40°	952.9	17.0
40°-50°	975.3	17.4
50°-60°	878.0	15.7
60°-70°	689.5	12.3
70°-80°	447.5	8.0
80°-90°	138.4	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°	1518.4	27.1
0°-40°	2471.3	44.1
0°-60°	4324.6	77.2
0°-90°	5600.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5600.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1967	1967	1967	1967	1967	
5°	1958	1962	1953	1964	1966	186
15°	1873	1878	1882	1898	1902	528
25°	1702	1716	1734	1763	1768	784
35°	1471	1489	1524	1562	1572	918
45°	1186	1215	1268	1316	1327	915
55°	884	923	991	1042	1053	793
65°	582	626	706	765	779	579
75°	295	352	443	503	518	312
85°	60	112	139	135	135	73
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1967.3	1967.3	1967.3	1967.3	1967.3
2.5°	1969.1	1969.1	1960.2	1969.1	1970.9
5°	1958.4	1962.0	1953.1	1963.8	1965.6
7.5°	1947.8	1947.8	1942.4	1953.1	1954.9
10°	1928.2	1930.0	1928.2	1940.7	1942.4
12.5°	1903.3	1906.9	1908.6	1921.1	1922.9
15°	1873.1	1878.4	1882.0	1898.0	1901.5
17.5°	1839.3	1844.6	1853.5	1871.3	1874.8
20°	1798.4	1805.5	1816.1	1839.3	1844.6
22.5°	1753.9	1761.0	1778.8	1800.1	1809.0
25°	1702.3	1716.5	1734.3	1762.8	1768.1
27.5°	1650.7	1663.2	1686.3	1716.5	1723.6
30°	1590.2	1609.8	1638.3	1668.5	1675.6
32.5°	1531.5	1551.1	1584.9	1616.9	1625.8
35°	1471.1	1488.8	1524.4	1561.8	1572.4
37.5°	1401.7	1424.8	1463.9	1501.3	1512.0
40°	1328.8	1357.2	1401.7	1440.8	1453.3
42.5°	1259.4	1289.6	1334.1	1376.8	1391.0
45°	1186.4	1214.9	1268.3	1316.3	1327.0
47.5°	1111.7	1143.8	1200.7	1248.7	1266.5
50°	1037.0	1070.8	1131.3	1181.1	1191.8
52.5°	962.3	997.9	1061.9	1115.3	1120.6
55°	884.1	923.2	990.8	1042.4	1053.0
57.5°	812.9	846.7	919.6	973.0	985.4
60°	734.6	772.0	850.3	900.1	916.1
62.5°	659.9	699.1	780.9	830.7	844.9
65°	581.7	626.1	706.2	764.9	779.1
67.5°	514.1	556.8	642.1	699.1	713.3
70°	435.8	483.8	574.5	633.2	647.5
72.5°	368.2	418.0	508.7	565.7	587.0
75°	295.3	352.2	442.9	503.4	517.6
77.5°	224.1	289.9	382.4	428.7	428.7
80°	160.1	229.5	314.8	336.2	339.7
82.5°	104.9	172.5	233.0	231.2	231.2
85°	60.5	112.1	138.7	135.2	135.2
87.5°	23.1	46.2	49.8	49.8	48.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)