

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: P260660

Luminaire Tested: **24CZ-LD5-60-UNV-L93050-W2A1-U-4500K**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P260660  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25697)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-60-UNV-L93050-W2A1-U-4500K  
Description: CRUZE 2x4 TUNABLE WHITE LED TROFFER  
WITH RIBBED LENS  
Light Source: (336) 90 CRI LEDS TUNED AT 4500K CCT  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5633.9 lumens  
Efficiency: N/A  
Efficacy: 122.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

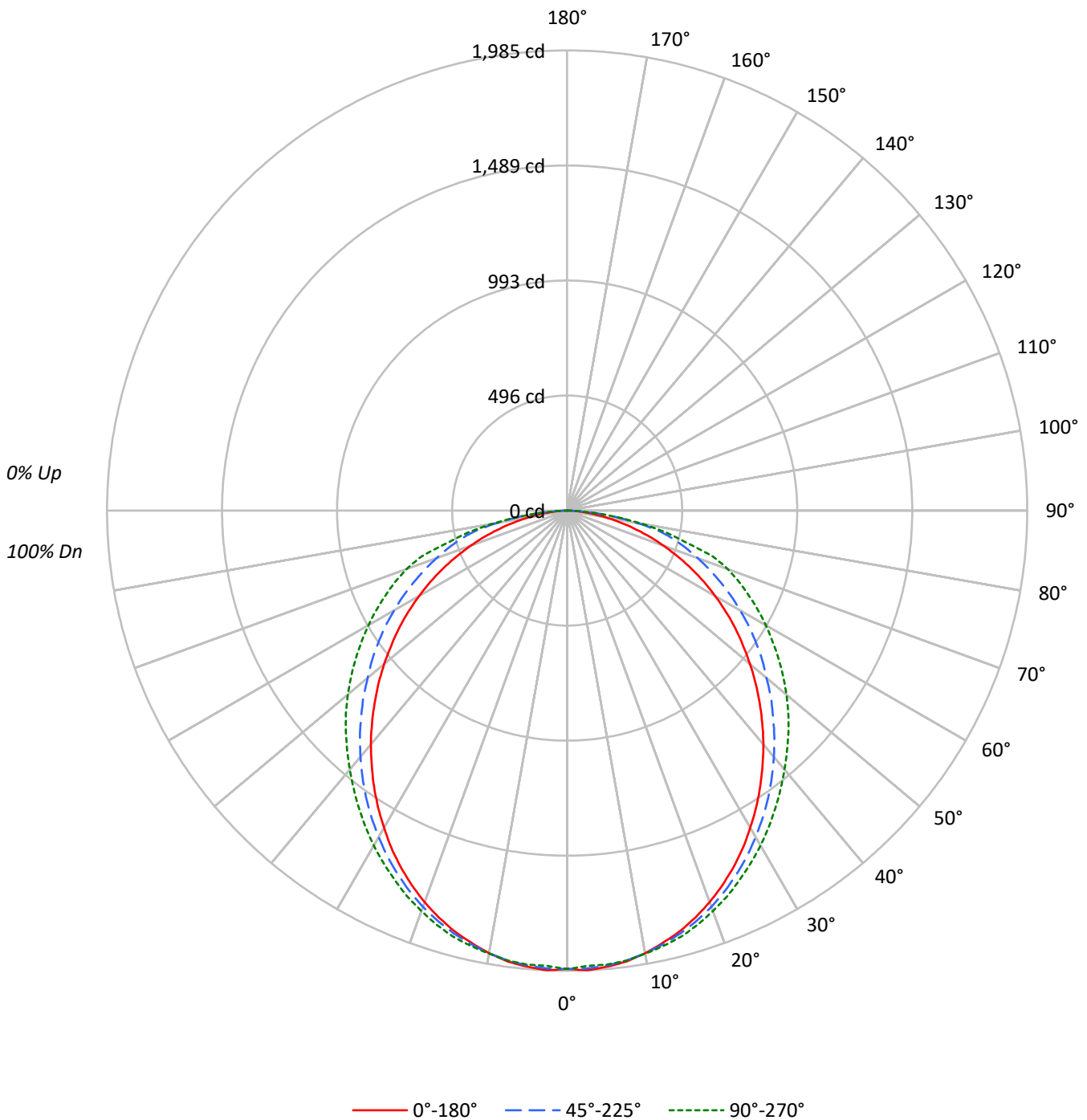
Input Watts (W): 46.127256  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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	95	88	81	76	84	79	74	81	76	72	78	74	71	68					68			
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	60	57					57			
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42					42			
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37					37			
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	35	32					32			
8	60	46	38	32	58	45	37	32	44	37	31	43	36	31	42	36	31	29					29			
9	56	42	34	28	54	42	34	28	41	33	28	40	33	28	38	32	28	26					26			
10	52	39	31	26	51	39	31	26	38	31	26	37	30	25	36	30	25	24					24			

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

	0°	45°	90°
0°	2660	2660	2660
5°	2668	2660	2655
10°	2649	2649	2651
15°	2617	2631	2649
20°	2574	2605	2632
25°	2520	2569	2612
30°	2454	2526	2592
35°	2386	2484	2573
40°	2314	2436	2561
45°	2235	2390	2569
50°	2156	2350	2584
55°	2077	2335	2611
60°	1983	2320	2663
65°	1879	2322	2751
70°	1738	2360	2899
75°	1554	2467	2758
80°	1300	2362	2526
85°	983	1817	1727



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	186.8	3.3
10°-20°	531.8	9.4
20°-30°	795.0	14.1
30°-40°	943.1	16.7
40°-50°	970.7	17.2
50°-60°	890.5	15.8
60°-70°	720.0	12.8
70°-80°	467.3	8.3
80°-90°	128.9	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°	1513.6	26.9
0°-40°	2456.6	43.6
0°-60°	4317.8	76.6
0°-90°	5633.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5633.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1977	1977	1977	1977	1977	
5°	1975	1962	1970	1968	1966	187
15°	1879	1871	1888	1896	1902	529
25°	1698	1699	1730	1746	1759	781
35°	1452	1464	1512	1545	1566	908
45°	1175	1194	1256	1316	1350	907
55°	885	912	995	1076	1113	791
65°	590	625	729	826	864	583
75°	299	355	474	530	530	318
85°	64	108	118	114	112	78
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1977.2	1977.2	1977.2	1977.2	1977.2
2.5°	1984.9	1969.5	1977.2	1975.3	1965.6
5°	1975.3	1961.8	1969.5	1967.6	1965.6
7.5°	1961.8	1948.3	1957.9	1956.0	1957.9
10°	1938.6	1927.0	1938.6	1940.6	1940.6
12.5°	1909.7	1900.0	1915.5	1919.3	1923.2
15°	1878.8	1871.1	1888.5	1896.2	1902.0
17.5°	1840.2	1834.5	1855.7	1865.3	1873.0
20°	1797.8	1795.9	1819.0	1828.7	1838.3
22.5°	1749.6	1749.6	1776.6	1788.2	1801.7
25°	1697.5	1699.4	1730.3	1745.7	1759.2
27.5°	1641.6	1643.5	1680.1	1699.4	1714.9
30°	1579.8	1587.5	1626.1	1651.2	1668.6
32.5°	1518.1	1527.8	1570.2	1599.1	1618.4
35°	1452.5	1464.1	1512.3	1545.1	1566.3
37.5°	1385.0	1398.5	1450.6	1487.2	1512.3
40°	1317.5	1332.9	1386.9	1429.4	1458.3
42.5°	1246.1	1263.5	1323.3	1373.4	1404.3
45°	1174.7	1194.0	1255.8	1315.6	1350.3
47.5°	1103.4	1126.5	1192.1	1257.7	1294.3
50°	1030.1	1053.2	1122.7	1197.9	1234.5
52.5°	956.8	983.8	1060.9	1138.1	1174.7
55°	885.4	912.4	995.4	1076.4	1113.0
57.5°	812.1	839.1	929.8	1014.6	1051.3
60°	736.9	767.7	862.3	949.1	989.6
62.5°	663.6	696.4	796.7	889.3	927.8
65°	590.3	625.0	729.2	825.6	864.2
67.5°	515.0	555.5	663.6	761.9	802.5
70°	441.7	486.1	599.9	698.3	736.9
72.5°	370.4	418.6	536.3	636.6	659.7
75°	299.0	354.9	474.5	530.5	530.5
77.5°	231.5	293.2	405.1	426.3	437.9
80°	167.8	235.3	304.8	329.9	326.0
82.5°	111.9	179.4	218.0	218.0	212.2
85°	63.7	108.0	117.7	113.8	111.9
87.5°	27.0	40.5	36.7	28.9	25.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)