

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: P230098

Luminaire Tested: **24CZ-LD5-65SE-S-UNV-L940-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P230098  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25694)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ-LD5-65SE-S-UNV-L940-CD1-U  
Description: CRUZE 2x4 LED TROFFER  
WITH SMOOTH LENS  
Light Source: (84) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5883.0 lumens  
Efficiency: N/A  
Efficacy: 98.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

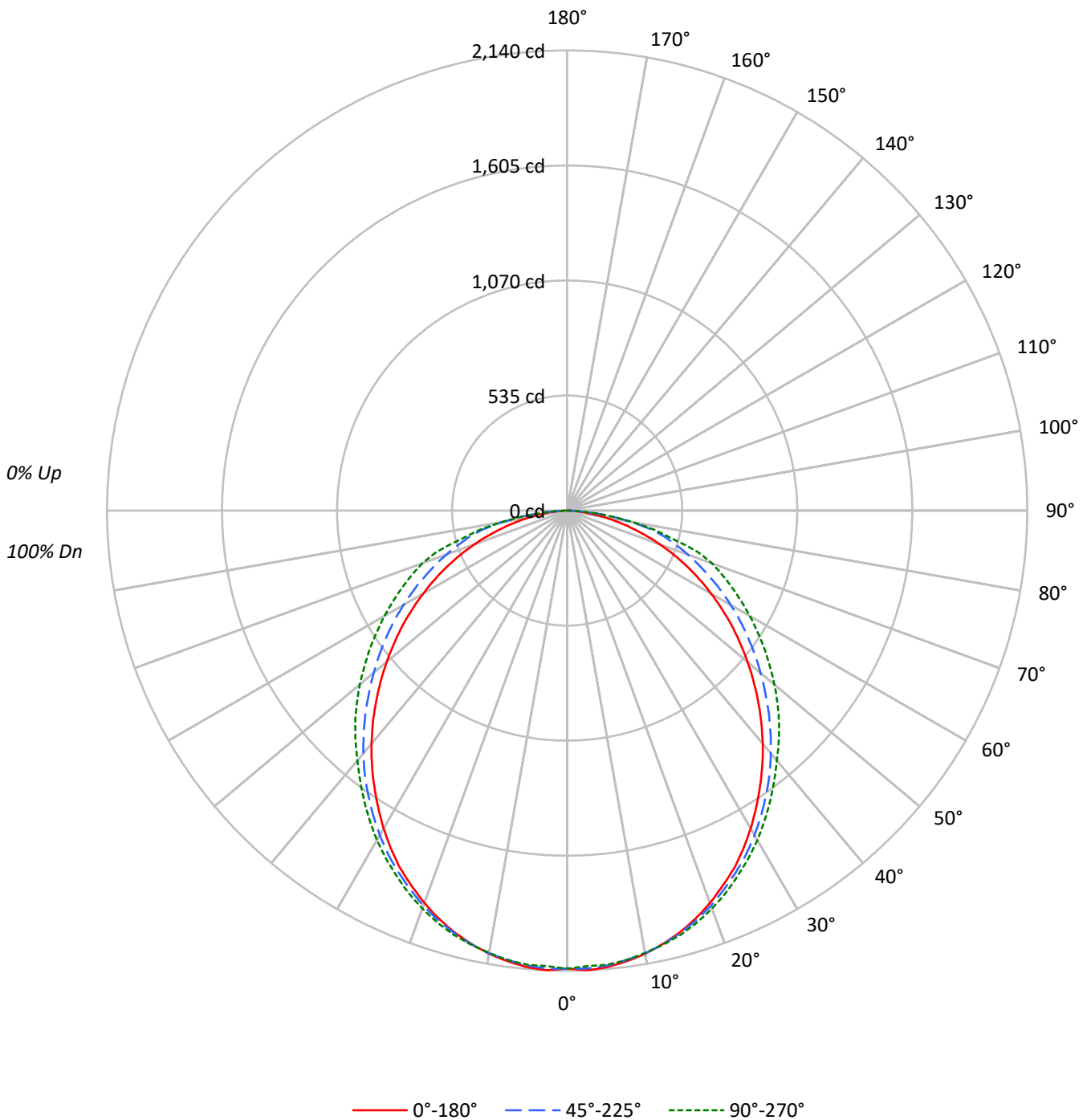
Input Watts (W): 60  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83					83			
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69					69			
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56	52	50					50			
5	76	63	53	47	73	61	53	47	59	52	46	57	51	45	55	50	45	43					43			
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38					38			
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33					33			
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30					30			
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27					27			
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24					24			

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

	0°	45°	90°
0°	2866	2866	2866
5°	2879	2869	2863
10°	2859	2856	2854
15°	2828	2833	2844
20°	2780	2800	2820
25°	2726	2755	2784
30°	2652	2707	2749
35°	2569	2649	2704
40°	2486	2589	2665
45°	2391	2522	2652
50°	2295	2458	2635
55°	2195	2406	2627
60°	2081	2365	2639
65°	1957	2337	2692
70°	1802	2349	2818
75°	1598	2432	2625
80°	1335	2305	2366
85°	997	1843	1692



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	201.4	3.4
10°-20°	572.7	9.7
20°-30°	853.4	14.5
30°-40°	1004.6	17.1
40°-50°	1020.9	17.4
50°-60°	917.9	15.6
60°-70°	725.1	12.3
70°-80°	460.0	7.8
80°-90°	127.0	2.2
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°	1627.5	27.7
0°-40°	2632.1	44.7
0°-60°	4570.9	77.7
0°-90°	5883.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5883.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2130	2130	2130	2130	2130	
5°	2132	2114	2124	2120	2120	202
15°	2030	2020	2034	2040	2042	572
25°	1836	1834	1856	1867	1875	844
35°	1564	1574	1613	1631	1646	979
45°	1257	1274	1325	1364	1394	970
55°	936	959	1026	1092	1120	836
65°	615	646	734	814	846	609
75°	307	360	468	509	505	327
85°	65	112	119	110	110	79
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2129.8	2129.8	2129.8	2129.8	2129.8
2.5°	2139.5	2123.9	2131.7	2127.8	2120.0
5°	2131.7	2114.1	2123.9	2120.0	2120.0
7.5°	2114.1	2100.4	2108.2	2106.3	2108.2
10°	2092.6	2078.9	2090.6	2090.6	2088.6
12.5°	2063.2	2051.5	2065.2	2065.2	2067.1
15°	2029.9	2020.1	2033.8	2039.7	2041.7
17.5°	1988.8	1979.0	1996.6	2002.5	2008.4
20°	1941.8	1937.9	1955.5	1961.4	1969.2
22.5°	1889.0	1889.0	1906.6	1914.4	1926.2
25°	1836.1	1834.2	1855.7	1867.4	1875.3
27.5°	1773.5	1775.4	1802.9	1814.6	1824.4
30°	1706.9	1710.9	1742.2	1755.9	1769.6
32.5°	1636.5	1644.3	1679.5	1695.2	1708.9
35°	1564.0	1573.8	1613.0	1630.6	1646.3
37.5°	1491.6	1505.3	1546.4	1564.0	1581.7
40°	1415.3	1427.0	1474.0	1495.5	1517.1
42.5°	1337.0	1352.6	1399.6	1430.9	1456.4
45°	1256.7	1274.3	1325.2	1364.4	1393.7
47.5°	1176.5	1199.9	1248.9	1301.7	1327.2
50°	1096.2	1119.7	1174.5	1233.2	1258.7
52.5°	1014.0	1037.5	1100.1	1160.8	1188.2
55°	935.7	959.2	1025.7	1092.3	1119.7
57.5°	853.5	878.9	953.3	1021.8	1049.2
60°	773.2	798.7	878.9	951.3	980.7
62.5°	694.9	722.3	806.5	882.8	912.2
65°	614.7	646.0	734.1	814.3	845.6
67.5°	536.4	571.6	663.6	747.8	781.0
70°	458.1	499.2	597.0	683.2	716.4
72.5°	381.7	426.7	530.5	616.6	634.2
75°	307.3	360.2	467.8	508.9	505.0
77.5°	236.9	295.6	397.4	405.2	416.9
80°	172.3	236.9	297.5	313.2	305.4
82.5°	113.5	178.1	213.4	205.5	203.6
85°	64.6	111.6	119.4	109.6	109.6
87.5°	27.4	45.0	39.1	29.4	27.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)