

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: P388928

Luminaire Tested: **24CZ2-60HE-SQR-UNV-L940-CD1-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: P388928  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-60HE-SQR-UNV-L940-CD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4931.3 lumens  
Efficiency: N/A  
Efficacy: 111.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

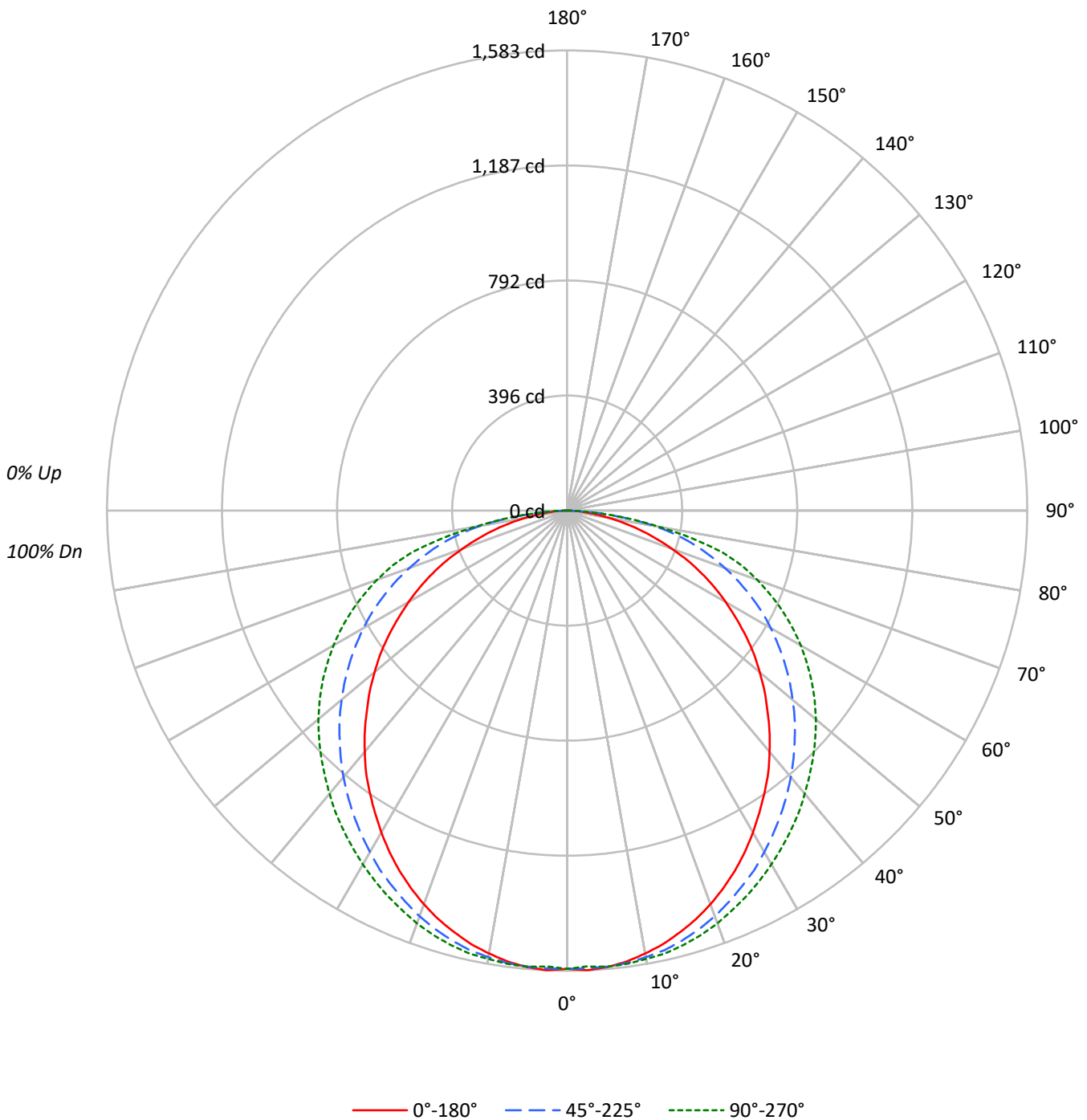
Input Watts (W): 44.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89		92	89	87		89	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73		80	75	71		77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60		70	64	59		67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51		62	55	50		60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44		55	49	43		54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38		50	43	38		48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34		45	39	33		44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30		42	35	30		40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27		38	32	27		37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24		36	29	24		35	29	24	22

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

	0°	45°	90°
0°	2121	2121	2121
5°	2129	2127	2127
10°	2114	2131	2140
15°	2091	2132	2155
20°	2063	2126	2164
25°	2028	2115	2171
30°	1986	2108	2183
35°	1944	2102	2204
40°	1902	2102	2234
45°	1853	2107	2277
50°	1810	2120	2338
55°	1757	2143	2410
60°	1696	2178	2498
65°	1623	2219	2603
70°	1506	2274	2735
75°	1363	2353	2861
80°	1148	2359	2460
85°	880	1785	1785



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	149.6	3.0
10°-20°	430.5	8.7
20°-30°	653.9	13.3
30°-40°	795.4	16.1
40°-50°	846.8	17.2
50°-60°	806.5	16.4
60°-70°	674.5	13.7
70°-80°	449.7	9.1
80°-90°	124.4	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°	1234.0	25.0
0°-40°	2029.4	41.2
0°-60°	3682.7	74.7
0°-90°	4931.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4931.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1576	1576	1576	1576	1576	
5°	1576	1566	1575	1575	1575	150
15°	1501	1505	1531	1542	1547	423
25°	1366	1384	1425	1449	1462	629
35°	1184	1218	1280	1322	1342	741
45°	974	1026	1107	1169	1197	753
55°	749	814	914	993	1028	670
65°	510	585	697	783	818	504
75°	262	345	453	529	550	278
85°	57	106	116	114	116	69
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1576.3	1576.3	1576.3	1576.3	1576.3
2.5°	1582.8	1571.4	1576.3	1576.3	1569.8
5°	1576.3	1566.5	1574.7	1574.7	1574.7
7.5°	1564.9	1556.7	1569.8	1573.0	1573.0
10°	1547.0	1543.7	1560.0	1564.9	1566.5
12.5°	1527.4	1525.8	1548.6	1555.1	1560.0
15°	1501.4	1504.6	1530.7	1542.1	1547.0
17.5°	1473.7	1480.2	1509.5	1525.8	1530.7
20°	1441.1	1450.9	1485.1	1501.4	1511.1
22.5°	1405.3	1420.0	1455.8	1475.3	1486.7
25°	1366.2	1384.1	1424.8	1449.3	1462.3
27.5°	1323.9	1346.7	1393.9	1421.6	1434.6
30°	1278.3	1304.3	1356.5	1389.0	1405.3
32.5°	1231.1	1262.0	1319.0	1354.8	1374.4
35°	1183.8	1218.0	1279.9	1322.3	1341.8
37.5°	1136.6	1170.8	1239.2	1284.8	1309.2
40°	1082.9	1123.6	1196.9	1247.3	1271.8
42.5°	1030.8	1074.7	1152.9	1208.3	1234.3
45°	973.8	1025.9	1107.3	1169.2	1196.9
47.5°	921.7	973.8	1061.7	1126.8	1157.8
50°	864.7	920.0	1012.9	1084.5	1117.1
52.5°	809.3	866.3	964.0	1040.5	1073.1
55°	749.1	814.2	913.5	993.3	1027.5
57.5°	688.8	758.8	861.4	944.5	978.7
60°	630.2	701.8	809.3	892.4	928.2
62.5°	571.6	643.2	755.6	840.3	874.4
65°	509.7	584.6	697.0	783.3	817.5
67.5°	447.8	526.0	638.3	724.6	757.2
70°	382.7	465.7	578.1	662.8	695.3
72.5°	322.4	405.5	516.2	599.2	630.2
75°	262.2	345.2	452.7	529.2	550.4
77.5°	203.5	286.6	382.7	433.2	438.0
80°	148.2	226.3	304.5	319.2	317.5
82.5°	99.3	169.4	210.1	211.7	216.6
85°	57.0	105.8	115.6	114.0	115.6
87.5°	22.8	37.5	32.6	24.4	24.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)