

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: P388496

Luminaire Tested: **24CZ2-30HE-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: P388496  
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: 24CZ2-30HE-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: 2472.6 lumens  
Efficiency: N/A  
Efficacy: 110.4 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

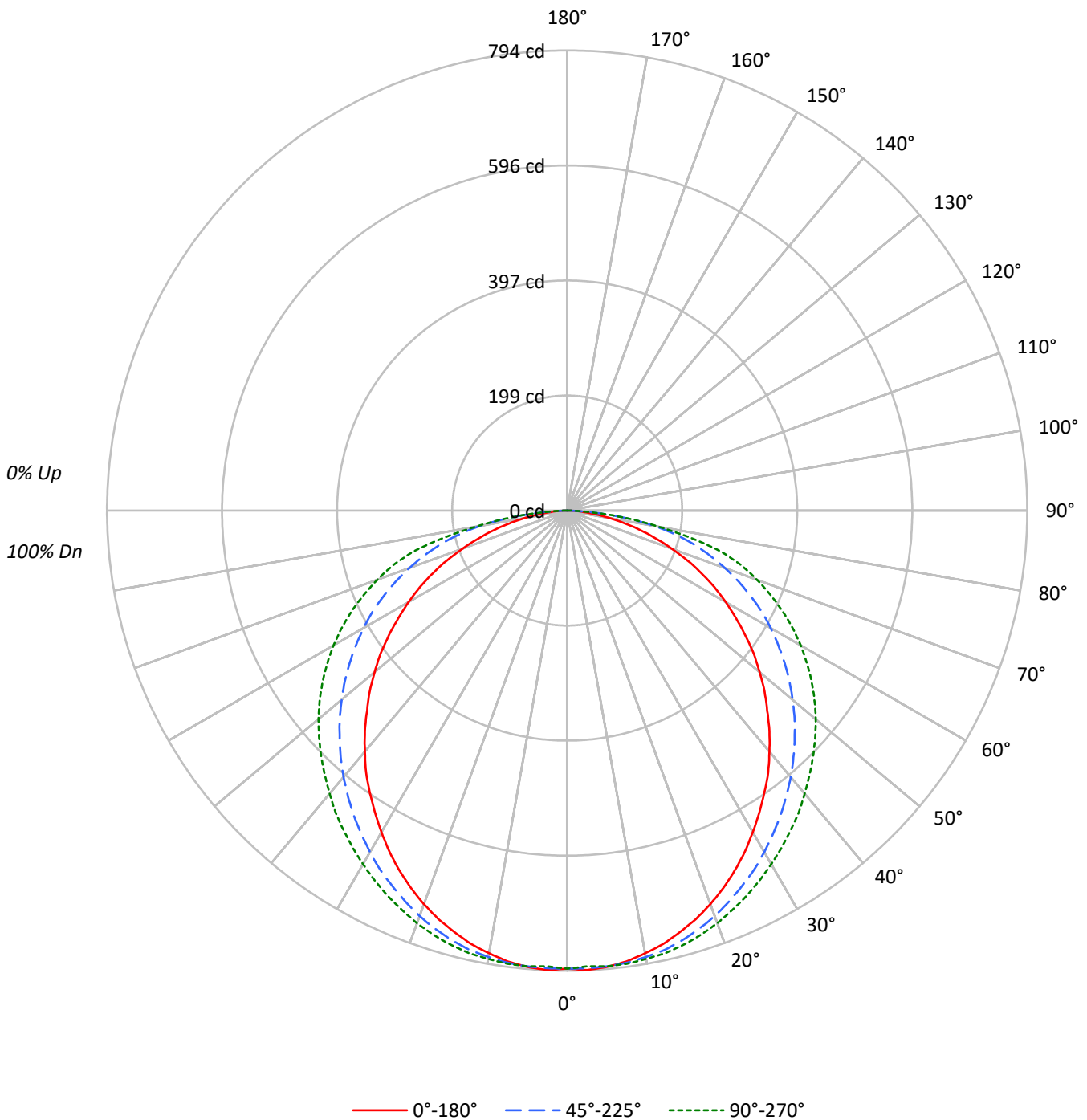
Input Watts (W): 22.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1063	1063	1063
5°	1068	1066	1066
10°	1060	1069	1073
15°	1049	1069	1081
20°	1035	1066	1085
25°	1017	1061	1088
30°	996	1057	1095
35°	975	1054	1105
40°	954	1054	1120
45°	929	1056	1142
50°	908	1063	1172
55°	881	1075	1209
60°	850	1092	1252
65°	814	1113	1305
70°	755	1140	1371
75°	684	1180	1435
80°	576	1183	1234
85°	442	895	895



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.0	3.0
10°-20°	215.9	8.7
20°-30°	327.9	13.3
30°-40°	398.8	16.1
40°-50°	424.6	17.2
50°-60°	404.4	16.4
60°-70°	338.2	13.7
70°-80°	225.5	9.1
80°-90°	62.4	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°	618.7	25.0
0°-40°	1017.5	41.2
0°-60°	1846.5	74.7
0°-90°	2472.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2472.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	790	790	790	790	790	
5°	790	786	790	790	790	75
15°	753	754	768	773	776	212
25°	685	694	714	727	733	315
35°	594	611	642	663	673	371
45°	488	514	555	586	600	377
55°	376	408	458	498	515	336
65°	256	293	350	393	410	252
75°	132	173	227	265	276	139
85°	29	53	58	57	58	35
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	790.4	790.4	790.4	790.4	790.4
2.5°	793.6	787.9	790.4	790.4	787.1
5°	790.4	785.5	789.5	789.5	789.5
7.5°	784.6	780.6	787.1	788.7	788.7
10°	775.7	774.0	782.2	784.6	785.5
12.5°	765.9	765.1	776.5	779.7	782.2
15°	752.8	754.4	767.5	773.2	775.7
17.5°	738.9	742.2	756.9	765.1	767.5
20°	722.6	727.5	744.6	752.8	757.7
22.5°	704.6	712.0	729.9	739.7	745.5
25°	685.0	694.0	714.4	726.7	733.2
27.5°	663.8	675.2	698.9	712.8	719.3
30°	640.9	654.0	680.1	696.5	704.6
32.5°	617.3	632.8	661.4	679.3	689.1
35°	593.6	610.7	641.8	663.0	672.8
37.5°	569.9	587.1	621.3	644.2	656.5
40°	543.0	563.4	600.1	625.4	637.7
42.5°	516.8	538.9	578.1	605.8	618.9
45°	488.3	514.4	555.2	586.2	600.1
47.5°	462.1	488.3	532.4	565.0	580.5
50°	433.6	461.3	507.9	543.8	560.1
52.5°	405.8	434.4	483.4	521.7	538.1
55°	375.6	408.2	458.1	498.1	515.2
57.5°	345.4	380.5	431.9	473.6	490.7
60°	316.0	351.9	405.8	447.4	465.4
62.5°	286.6	322.5	378.9	421.3	438.5
65°	255.6	293.1	349.5	392.7	409.9
67.5°	224.5	263.7	320.1	363.3	379.7
70°	191.9	233.5	289.9	332.3	348.6
72.5°	161.7	203.3	258.8	300.5	316.0
75°	131.5	173.1	227.0	265.4	276.0
77.5°	102.1	143.7	191.9	217.2	219.6
80°	74.3	113.5	152.7	160.0	159.2
82.5°	49.8	84.9	105.3	106.1	108.6
85°	28.6	53.1	58.0	57.2	58.0
87.5°	11.4	18.8	16.3	12.2	12.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)