

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: P388593

Luminaire Tested: **24CZ2-35VHE-SQR-UNV-L950-CD1-SDWPD1-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: P388593  
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: 24CZ2-35VHE-SQR-UNV-L950-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2995.7 lumens  
Efficiency: N/A  
Efficacy: 131.4 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

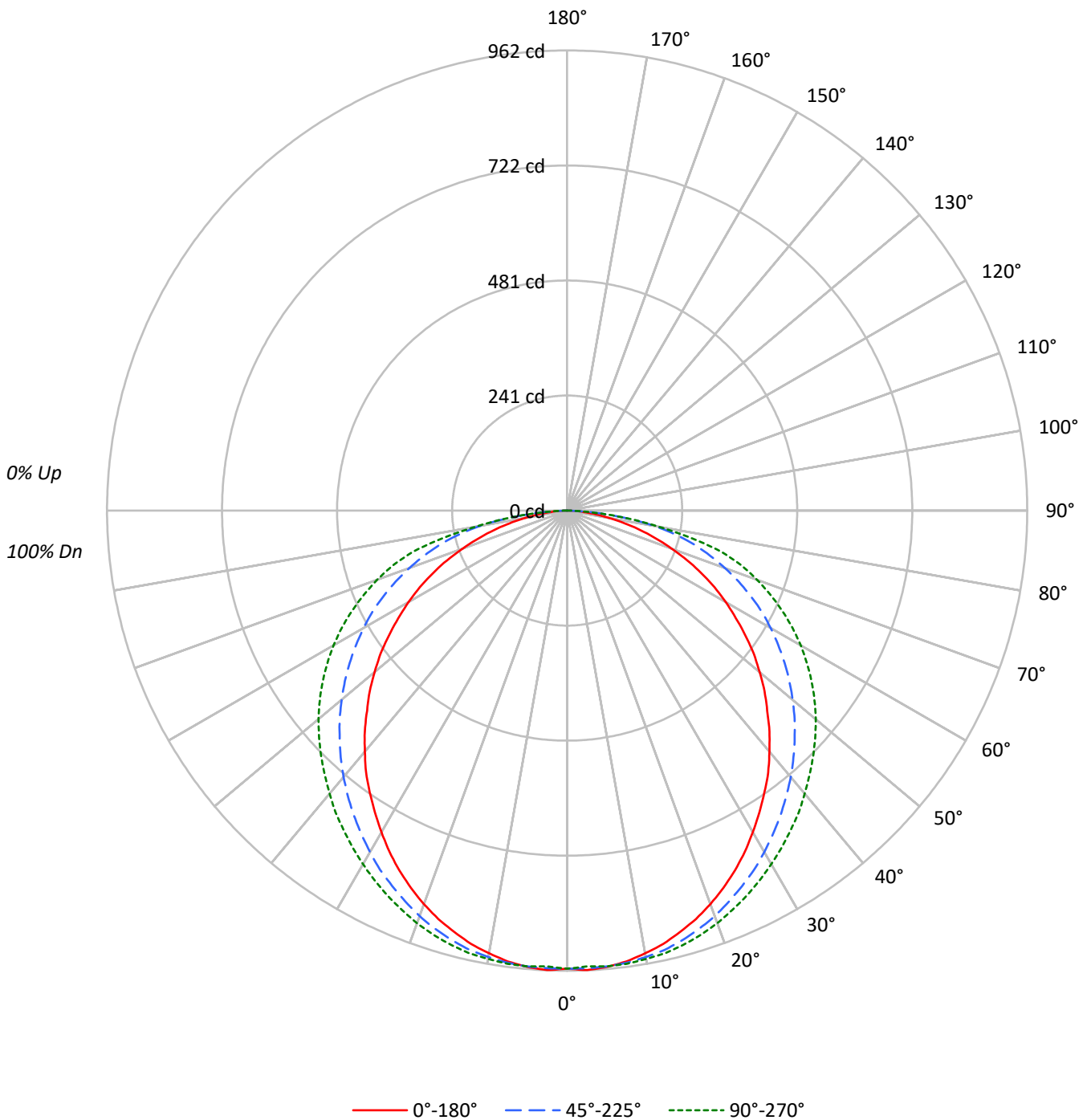
Input Watts (W): 22.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	1288	1288	1288
5°	1293	1292	1292
10°	1284	1295	1300
15°	1271	1295	1309
20°	1254	1292	1314
25°	1232	1285	1319
30°	1206	1280	1326
35°	1181	1277	1339
40°	1155	1277	1357
45°	1126	1280	1384
50°	1100	1288	1420
55°	1067	1302	1464
60°	1030	1323	1517
65°	986	1348	1581
70°	915	1382	1662
75°	828	1430	1738
80°	697	1433	1495
85°	534	1084	1084



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.9	3.0
10°-20°	261.5	8.7
20°-30°	397.2	13.3
30°-40°	483.2	16.1
40°-50°	514.4	17.2
50°-60°	490.0	16.4
60°-70°	409.7	13.7
70°-80°	273.2	9.1
80°-90°	75.6	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°	749.6	25.0
0°-40°	1232.8	41.2
0°-60°	2237.2	74.7
0°-90°	2995.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2995.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	958	958	958	958	958	
5°	958	952	957	957	957	91
15°	912	914	930	937	940	257
25°	830	841	866	880	888	382
35°	719	740	778	803	815	450
45°	592	623	673	710	727	457
55°	455	495	555	603	624	407
65°	310	355	423	476	497	306
75°	159	210	275	322	334	169
85°	35	64	70	69	70	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	957.6	957.6	957.6	957.6	957.6
2.5°	961.5	954.6	957.6	957.6	953.6
5°	957.6	951.6	956.6	956.6	956.6
7.5°	950.6	945.7	953.6	955.6	955.6
10°	939.8	937.8	947.7	950.6	951.6
12.5°	927.9	926.9	940.8	944.7	947.7
15°	912.1	914.0	929.9	936.8	939.8
17.5°	895.3	899.2	917.0	926.9	929.9
20°	875.5	881.4	902.2	912.1	918.0
22.5°	853.7	862.6	884.4	896.2	903.2
25°	830.0	840.8	865.6	880.4	888.3
27.5°	804.2	818.1	846.8	863.6	871.5
30°	776.5	792.4	824.0	843.8	853.7
32.5°	747.9	766.7	801.3	823.0	834.9
35°	719.2	739.9	777.5	803.3	815.1
37.5°	690.5	711.3	752.8	780.5	795.3
40°	657.8	682.6	727.1	757.7	772.6
42.5°	626.2	652.9	700.4	734.0	749.8
45°	591.6	623.2	672.7	710.3	727.1
47.5°	559.9	591.6	645.0	684.5	703.3
50°	525.3	558.9	615.3	658.8	678.6
52.5°	491.6	526.3	585.6	632.1	651.9
55°	455.0	494.6	555.0	603.4	624.2
57.5°	418.4	461.0	523.3	573.8	594.5
60°	382.8	426.4	491.6	542.1	563.9
62.5°	347.2	390.7	459.0	510.4	531.2
65°	309.6	355.1	423.4	475.8	496.6
67.5°	272.0	319.5	387.8	440.2	460.0
70°	232.5	282.9	351.2	402.6	422.4
72.5°	195.9	246.3	313.6	364.0	382.8
75°	159.3	209.7	275.0	321.5	334.4
77.5°	123.7	174.1	232.5	263.1	266.1
80°	90.0	137.5	185.0	193.9	192.9
82.5°	60.3	102.9	127.6	128.6	131.6
85°	34.6	64.3	70.2	69.2	70.2
87.5°	13.8	22.8	19.8	14.8	14.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)