

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: P272133

Luminaire Tested: **24CZ2-35HE-S-UNV-L930-CD1-U**

Issue Date: 3/3/2020

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: P272133  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-35HE-S-UNV-L930-CD1-U  
Description: 2'x4' TROFFER LED MODULE,SMOOTH LENS, 90CRI  
Light Source: (168) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

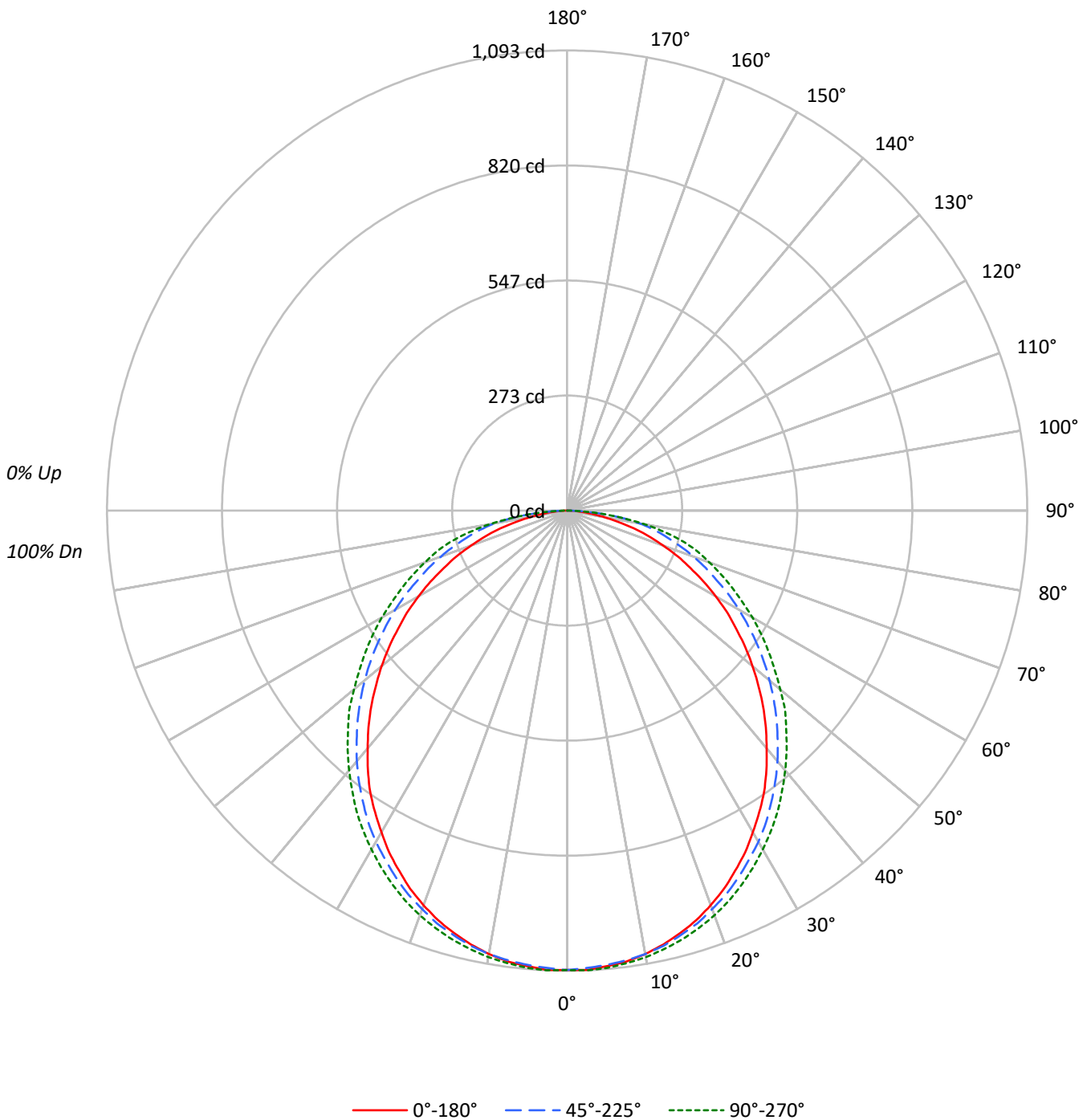
Lumens per Lamp: N/A  
Luminaire Lumens: 3106.0 lumens  
Efficiency: N/A  
Efficacy: 115.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 26.9  
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	99	95	106	101	97	93	97	93	90		93	90	88		89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36	30	26	24

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

	0°	45°	90°
0°	1468	1468	1468
5°	1467	1463	1472
10°	1461	1461	1472
15°	1447	1454	1469
20°	1428	1442	1465
25°	1402	1428	1456
30°	1370	1412	1444
35°	1340	1389	1432
40°	1294	1365	1416
45°	1252	1338	1400
50°	1204	1313	1384
55°	1150	1289	1370
60°	1097	1269	1367
65°	1027	1247	1376
70°	951	1254	1413
75°	852	1277	1493
80°	688	1353	1460
85°	517	1189	1158



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.3	3.3
10°-20°	295.2	9.5
20°-30°	443.7	14.3
30°-40°	528.5	17.0
40°-50°	540.9	17.4
50°-60°	487.0	15.7
60°-70°	382.4	12.3
70°-80°	248.2	8.0
80°-90°	76.8	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°	842.2	27.1
0°-40°	1370.7	44.1
0°-60°	2398.6	77.2
0°-90°	3106.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3106.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1091	1091	1091	1091	1091	
5°	1086	1088	1083	1089	1090	103
15°	1039	1042	1044	1053	1055	293
25°	944	952	962	978	981	435
35°	816	826	846	866	872	509
45°	658	674	703	730	736	507
55°	490	512	550	578	584	440
65°	323	347	392	424	432	321
75°	164	195	246	279	287	173
85°	34	62	77	75	75	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1091.2	1091.2	1091.2	1091.2	1091.2
2.5°	1092.1	1092.1	1087.2	1092.1	1093.1
5°	1086.2	1088.2	1083.3	1089.2	1090.2
7.5°	1080.3	1080.3	1077.3	1083.3	1084.3
10°	1069.5	1070.4	1069.5	1076.4	1077.3
12.5°	1055.6	1057.6	1058.6	1065.5	1066.5
15°	1038.9	1041.8	1043.8	1052.7	1054.7
17.5°	1020.1	1023.1	1028.0	1037.9	1039.9
20°	997.4	1001.4	1007.3	1020.1	1023.1
22.5°	972.8	976.7	986.6	998.4	1003.4
25°	944.2	952.1	961.9	977.7	980.7
27.5°	915.5	922.5	935.3	952.1	956.0
30°	882.0	892.9	908.6	925.4	929.4
32.5°	849.4	860.3	879.0	896.8	901.7
35°	815.9	825.8	845.5	866.2	872.1
37.5°	777.4	790.3	812.0	832.7	838.6
40°	737.0	752.8	777.4	799.1	806.0
42.5°	698.5	715.3	739.9	763.6	771.5
45°	658.0	673.8	703.4	730.1	736.0
47.5°	616.6	634.4	665.9	692.6	702.4
50°	575.2	593.9	627.5	655.1	661.0
52.5°	533.7	553.5	589.0	618.6	621.5
55°	490.3	512.0	549.5	578.1	584.1
57.5°	450.9	469.6	510.1	539.7	546.6
60°	407.5	428.2	471.6	499.2	508.1
62.5°	366.0	387.7	433.1	460.7	468.6
65°	322.6	347.3	391.7	424.2	432.1
67.5°	285.1	308.8	356.2	387.7	395.6
70°	241.7	268.3	318.7	351.2	359.1
72.5°	204.2	231.8	282.2	313.7	325.6
75°	163.8	195.3	245.7	279.2	287.1
77.5°	124.3	160.8	212.1	237.8	237.8
80°	88.8	127.3	174.6	186.5	188.4
82.5°	58.2	95.7	129.2	128.3	128.3
85°	33.5	62.2	77.0	75.0	75.0
87.5°	12.8	25.7	27.6	27.6	26.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)