

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: P274800

Luminaire Tested: **24CZ2-45HE-RDP-UNV-L935-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: P274800  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-45HE-RDP-UNV-L935-CD1-U  
Description: 2'x4' TROFFER LED MODULE,SMOOTH LENS WITH INSERT, 90CRI  
Light Source: (168) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2605.0 lumens  
Efficiency: N/A  
Efficacy: 73.8 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

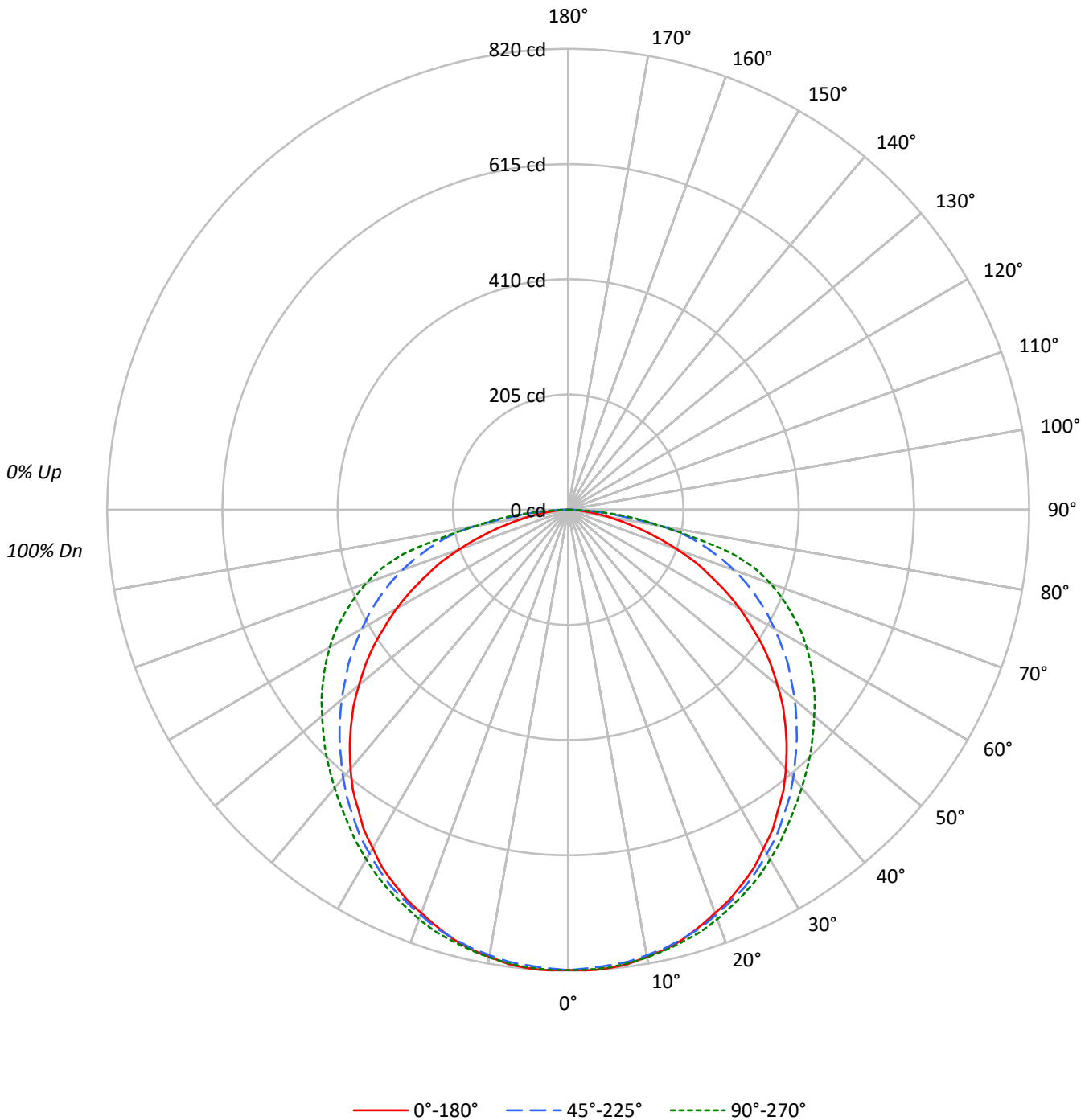
Input Watts (W): 35.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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		88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		34	28	24	22

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

	0°	45°	90°
0°	1102	1102	1102
5°	1106	1099	1105
10°	1103	1100	1105
15°	1102	1100	1107
20°	1093	1099	1110
25°	1090	1101	1113
30°	1080	1098	1116
35°	1070	1095	1121
40°	1058	1094	1135
45°	1040	1094	1161
50°	1017	1101	1195
55°	991	1118	1249
60°	949	1140	1318
65°	889	1181	1399
70°	808	1235	1505
75°	685	1303	1572
80°	541	1312	1272
85°	398	997	1118



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.7	3.0
10°-20°	223.6	8.6
20°-30°	342.0	13.1
30°-40°	418.1	16.0
40°-50°	445.6	17.1
50°-60°	426.0	16.4
60°-70°	360.9	13.9
70°-80°	242.6	9.3
80°-90°	68.4	2.6
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°	643.3	24.7
0°-40°	1061.4	40.7
0°-60°	1933.1	74.2
0°-90°	2605.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2605.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	819	819	819	819	819	
5°	819	818	814	818	818	78
15°	791	791	790	796	795	223
25°	734	736	742	748	749	338
35°	651	656	667	680	682	408
45°	547	556	575	600	610	422
55°	422	438	477	514	532	376
65°	279	308	371	420	439	277
75°	132	180	251	293	302	141
85°	26	53	65	70	72	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	819.2	819.2	819.2	819.2	819.2
2.5°	820.5	820.5	816.6	819.2	819.2
5°	819.2	817.9	814.0	817.9	817.9
7.5°	815.3	814.0	811.4	815.3	814.0
10°	807.6	807.6	805.0	808.9	808.9
12.5°	801.1	799.8	798.5	803.7	802.4
15°	790.8	790.8	789.5	795.9	794.6
17.5°	777.9	779.1	780.4	785.6	786.9
20°	763.6	766.2	767.5	775.3	775.3
22.5°	750.7	752.0	754.6	762.3	762.3
25°	733.9	736.5	741.7	748.1	749.4
27.5°	717.1	718.4	724.9	733.9	735.2
30°	695.2	699.0	706.8	717.1	718.4
32.5°	675.8	679.7	688.7	699.0	701.6
35°	651.2	656.4	666.7	679.7	682.2
37.5°	629.3	633.1	646.1	660.3	664.1
40°	602.1	609.9	622.8	639.6	646.1
42.5°	575.0	582.7	598.2	620.2	628.0
45°	546.6	555.6	575.0	599.5	609.9
47.5°	518.1	528.5	550.4	578.9	590.5
50°	485.8	498.8	525.9	558.2	571.1
52.5°	454.8	470.3	500.0	536.2	553.0
55°	422.5	438.0	476.8	514.3	532.3
57.5°	386.3	407.0	449.7	492.3	511.7
60°	352.7	372.1	423.8	470.3	489.7
62.5°	316.6	342.4	398.0	447.1	466.5
65°	279.1	307.5	370.8	419.9	439.3
67.5°	245.5	276.5	343.7	392.8	412.2
70°	205.4	244.2	314.0	363.1	382.5
72.5°	168.0	210.6	283.0	330.8	348.9
75°	131.8	179.6	250.7	293.3	302.4
77.5°	98.2	148.6	217.1	235.2	228.7
80°	69.8	118.9	169.3	160.2	164.1
82.5°	45.2	90.4	104.7	118.9	122.8
85°	25.8	53.0	64.6	69.8	72.4
87.5°	11.6	19.4	25.8	25.8	24.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)