

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: P295024

Luminaire Tested: **24CZ2-35-HRP-UNV-L935-CD1-U**

Issue Date: 12/2/2019

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: P295024  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-35-HRP-UNV-L935-CD1-U  
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS  
Light Source: (84) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2389.5 lumens  
Efficiency: N/A  
Efficacy: 79.4 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

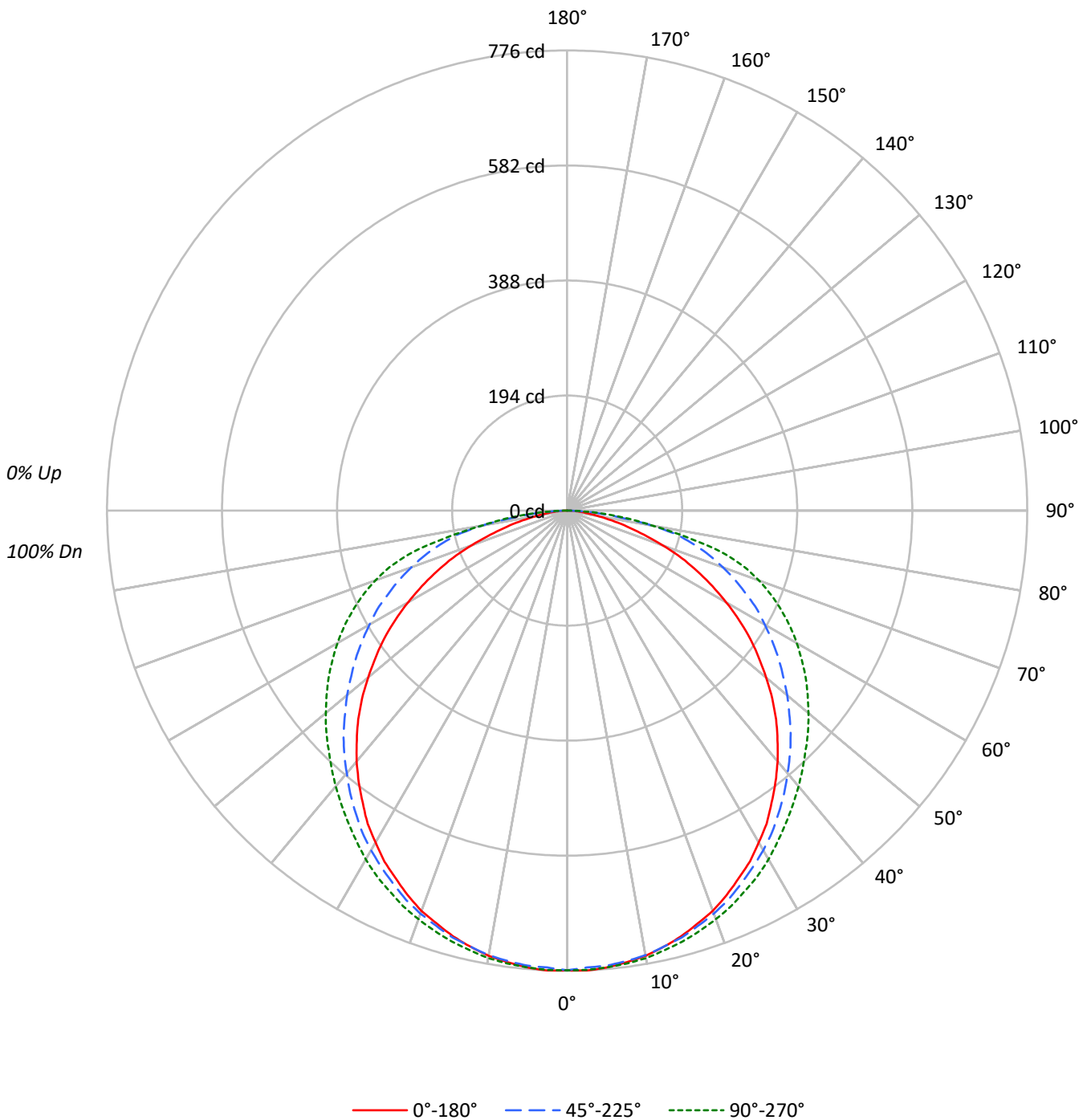
Input Watts (W): 30.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

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

	0°	45°	90°
0°	1043	1043	1043
5°	1044	1040	1044
10°	1041	1040	1047
15°	1035	1038	1048
20°	1028	1036	1050
25°	1016	1031	1052
30°	1004	1027	1055
35°	987	1022	1056
40°	970	1016	1066
45°	948	1015	1083
50°	917	1014	1112
55°	885	1021	1152
60°	834	1036	1203
65°	771	1060	1271
70°	673	1098	1354
75°	546	1155	1399
80°	403	1132	1132
85°	309	834	942



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.4	3.1
10°-20°	210.9	8.8
20°-30°	321.1	13.4
30°-40°	389.8	16.3
40°-50°	411.9	17.2
50°-60°	388.7	16.3
60°-70°	323.1	13.5
70°-80°	212.6	8.9
80°-90°	57.9	2.4
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°	605.4	25.3
0°-40°	995.3	41.7
0°-60°	1795.8	75.2
0°-90°	2389.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2389.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	775	775	775	775	775	
5°	773	773	770	773	773	73
15°	743	744	745	752	752	210
25°	684	688	694	706	708	316
35°	601	608	622	638	643	376
45°	498	508	533	559	569	384
55°	377	393	435	476	491	336
65°	242	270	333	382	399	239
75°	105	153	222	263	269	113
85°	20	44	54	60	61	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	775.3	775.3	775.3	775.3	775.3
2.5°	776.3	775.3	771.3	775.3	775.3
5°	773.3	773.3	770.3	773.3	773.3
7.5°	768.3	768.3	766.3	770.3	770.3
10°	762.3	762.3	761.3	766.3	766.3
12.5°	753.3	754.3	753.3	759.3	759.3
15°	743.3	744.3	745.3	752.3	752.3
17.5°	730.3	732.3	734.3	742.3	743.3
20°	718.3	719.3	723.3	732.3	733.3
22.5°	702.2	705.3	710.3	719.3	722.3
25°	684.2	688.2	694.2	706.3	708.3
27.5°	667.2	670.2	678.2	691.2	695.2
30°	646.2	651.2	661.2	674.2	679.2
32.5°	626.2	631.2	643.2	657.2	661.2
35°	601.2	608.2	622.2	638.2	643.2
37.5°	577.2	584.2	601.2	619.2	625.2
40°	552.2	560.2	578.2	599.2	607.2
42.5°	525.2	536.2	556.2	579.2	588.2
45°	498.2	508.2	533.2	559.2	569.2
47.5°	469.2	481.2	508.2	539.2	551.2
50°	438.2	453.2	484.2	518.2	531.2
52.5°	407.1	424.2	459.2	497.2	511.2
55°	377.1	393.1	435.2	476.2	491.2
57.5°	344.1	364.1	410.1	454.2	469.2
60°	310.1	332.1	385.1	431.2	447.2
62.5°	276.1	301.1	361.1	407.1	424.2
65°	242.1	270.1	333.1	382.1	399.1
67.5°	209.1	240.1	307.1	356.1	373.1
70°	171.1	210.1	279.1	327.1	344.1
72.5°	136.0	181.1	252.1	297.1	312.1
75°	105.0	153.1	222.1	263.1	269.1
77.5°	77.0	125.0	191.1	205.1	206.1
80°	52.0	100.0	146.1	144.1	146.1
82.5°	34.0	75.0	92.0	103.0	104.0
85°	20.0	44.0	54.0	60.0	61.0
87.5°	10.0	15.0	19.0	20.0	22.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)