

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: P474433

Luminaire Tested: **24CZ2-35VHE-HRP-UNV-L835-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474433  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-35VHE-HRP-UNV-L835-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP  
INSERT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2869.4 lumens  
Efficiency: N/A  
Efficacy: 120.1 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

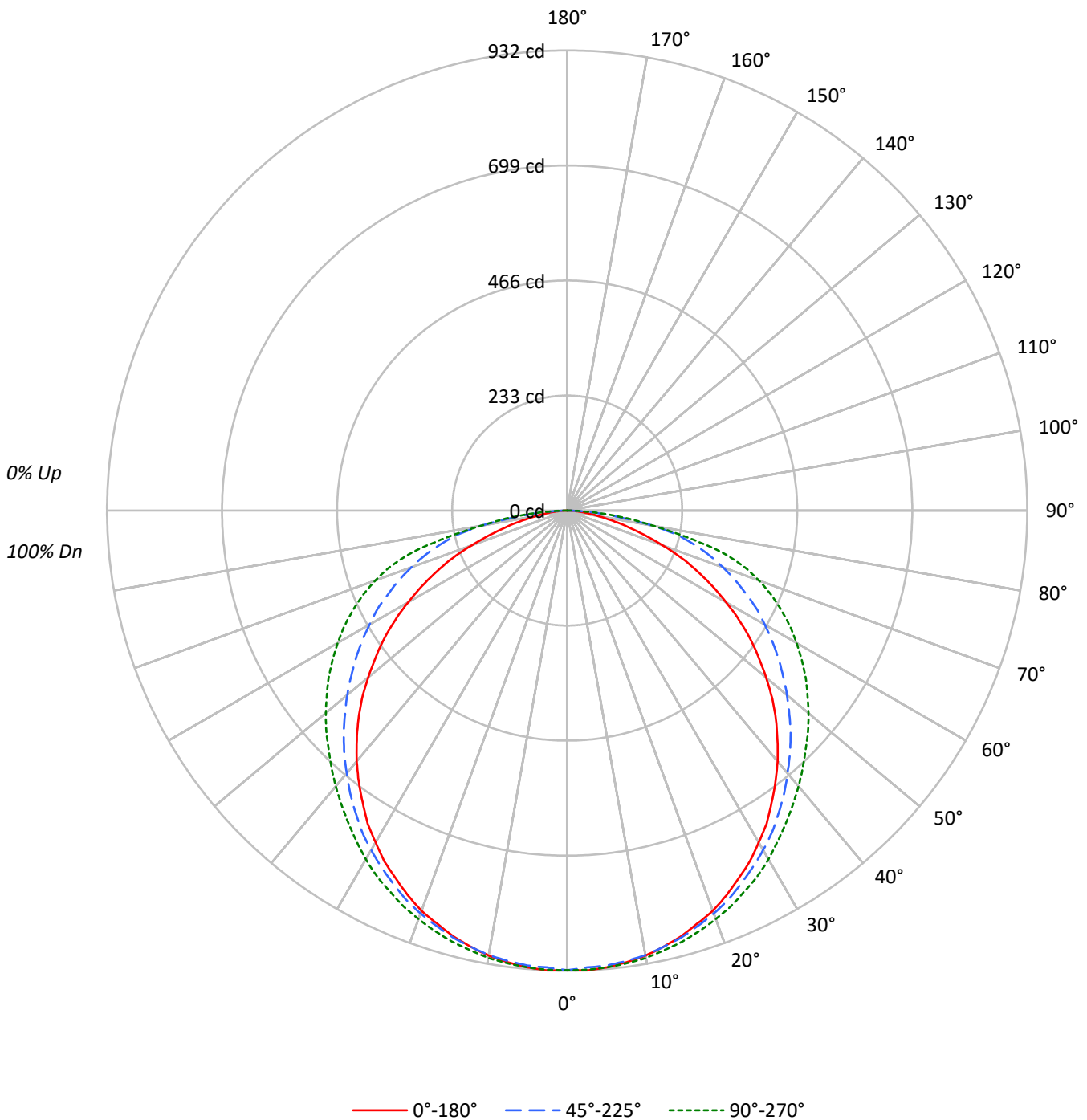
Input Watts (W): 23.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1253	1253	1253
5°	1254	1249	1254
10°	1251	1249	1257
15°	1243	1247	1258
20°	1235	1244	1261
25°	1220	1238	1263
30°	1206	1234	1267
35°	1186	1227	1269
40°	1165	1220	1281
45°	1138	1218	1301
50°	1101	1217	1335
55°	1062	1226	1384
60°	1002	1245	1445
65°	926	1274	1526
70°	808	1318	1626
75°	656	1386	1680
80°	484	1359	1359
85°	371	1002	1130



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	88.2	3.1
10°-20°	253.3	8.8
20°-30°	385.6	13.4
30°-40°	468.2	16.3
40°-50°	494.6	17.2
50°-60°	466.7	16.3
60°-70°	388.1	13.5
70°-80°	255.3	8.9
80°-90°	69.6	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°	727.0	25.3
0°-40°	1195.2	41.7
0°-60°	2156.5	75.2
0°-90°	2869.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2869.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	931	931	931	931	931	
5°	929	929	925	929	929	88
15°	892	894	895	903	903	252
25°	822	826	834	848	850	379
35°	722	730	747	766	772	452
45°	598	610	640	672	684	461
55°	453	472	522	572	590	403
65°	291	324	400	459	479	287
75°	126	184	267	316	323	136
85°	24	53	65	72	73	29
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	931.0	931.0	931.0	931.0	931.0
2.5°	932.2	931.0	926.2	931.0	931.0
5°	928.6	928.6	924.9	928.6	928.6
7.5°	922.6	922.6	920.1	924.9	924.9
10°	915.3	915.3	914.2	920.1	920.1
12.5°	904.6	905.7	904.6	911.7	911.7
15°	892.5	893.7	895.0	903.4	903.4
17.5°	877.0	879.3	881.8	891.3	892.5
20°	862.6	863.7	868.5	879.3	880.6
22.5°	843.3	846.9	852.9	863.7	867.4
25°	821.6	826.4	833.7	848.1	850.5
27.5°	801.3	804.9	814.5	830.1	834.9
30°	776.0	782.0	794.0	809.7	815.7
32.5°	752.0	758.0	772.4	789.2	794.0
35°	722.0	730.4	747.2	766.4	772.4
37.5°	693.2	701.5	722.0	743.6	750.9
40°	663.1	672.7	694.4	719.5	729.2
42.5°	630.6	643.8	667.9	695.5	706.3
45°	598.2	610.3	640.3	671.5	683.5
47.5°	563.4	577.9	610.3	647.5	662.0
50°	526.2	544.2	581.4	622.3	637.9
52.5°	489.0	509.3	551.4	597.0	613.9
55°	452.9	472.1	522.5	571.8	589.8
57.5°	413.3	437.3	492.6	545.3	563.4
60°	372.3	398.9	462.5	517.7	536.9
62.5°	331.5	361.6	433.6	489.0	509.3
65°	290.7	324.4	400.1	458.9	479.4
67.5°	251.0	288.3	368.8	427.7	448.0
70°	205.4	252.3	335.1	392.8	413.3
72.5°	163.4	217.5	302.7	356.8	374.8
75°	126.1	183.8	266.7	315.9	323.2
77.5°	92.5	150.2	229.4	246.2	247.4
80°	62.5	120.1	175.4	173.0	175.4
82.5°	40.8	90.1	110.5	123.8	124.9
85°	24.0	52.9	64.9	72.1	73.2
87.5°	12.0	18.0	22.8	24.0	26.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)