

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: P474737

Luminaire Tested: **24CZ2-60VHE-SQR-UNV-L850-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474737  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-60VHE-SQR-UNV-L850-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

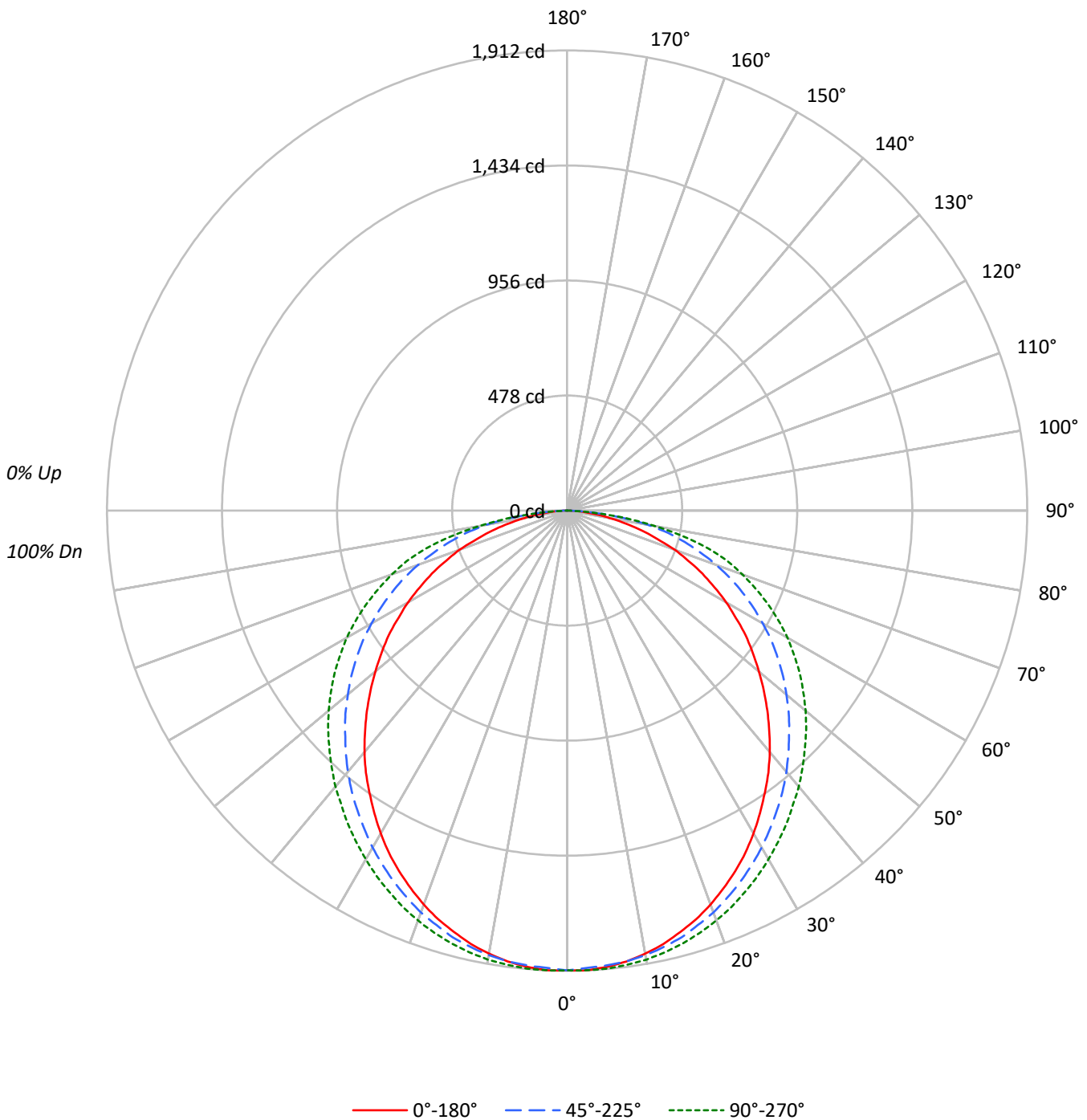
Lumens per Lamp: N/A  
Luminaire Lumens: 5815.4 lumens  
Efficiency: N/A  
Efficacy: 142.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 40.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
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	87	84	82
2	98	89	82	76	95	87	81	75	84	78	73		80	76	71		77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61		70	64	60		68	63	59	56
4	81	69	59	53	79	67	59	52	65	57	51		62	56	51		60	55	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	39		50	43	38		49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34		46	39	34		44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30		42	35	30		41	35	30	28
9	55	42	33	28	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	25		35	29	24	23

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

	0°	45°	90°
0°	5140	5140	5140
5°	5140	5125	5160
10°	5108	5126	5176
15°	5053	5115	5184
20°	4989	5090	5191
25°	4907	5054	5192
30°	4813	5023	5199
35°	4703	4993	5219
40°	4602	4977	5261
45°	4476	4964	5318
50°	4356	4978	5414
55°	4254	5012	5536
60°	4110	5050	5690
65°	3946	5111	5862
70°	3743	5183	6096
75°	3352	5255	6299
80°	2822	5269	5715
85°	2093	3986	3758



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	181.0	3.1
10°-20°	518.8	8.9
20°-30°	785.3	13.5
30°-40°	950.0	16.3
40°-50°	1002.8	17.2
50°-60°	945.7	16.3
60°-70°	779.6	13.4
70°-80°	511.5	8.8
80°-90°	140.6	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°	1485.2	25.5
0°-40°	2435.2	41.9
0°-60°	4383.7	75.4
0°-90°	5815.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5815.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1910	1910	1910	1910	1910	
5°	1903	1903	1897	1910	1910	181
15°	1814	1824	1836	1857	1861	512
25°	1653	1673	1702	1737	1748	761
35°	1432	1469	1520	1572	1589	896
45°	1176	1229	1304	1374	1397	908
55°	907	971	1068	1148	1180	808
65°	620	694	803	888	921	612
75°	322	405	505	585	606	341
85°	68	117	129	125	122	84
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1910.2	1910.2	1910.2	1910.2	1910.2
2.5°	1912.0	1910.2	1901.8	1913.0	1912.0
5°	1902.7	1902.7	1897.2	1910.2	1910.2
7.5°	1889.7	1890.7	1888.8	1903.7	1903.7
10°	1869.3	1873.0	1875.8	1892.5	1894.4
12.5°	1845.1	1851.6	1857.2	1877.7	1879.5
15°	1813.6	1823.8	1835.9	1857.2	1860.9
17.5°	1781.0	1793.1	1806.1	1834.0	1838.6
20°	1742.0	1756.0	1777.3	1805.2	1812.6
22.5°	1698.3	1717.9	1740.2	1773.6	1782.9
25°	1652.8	1673.3	1702.1	1737.4	1748.5
27.5°	1603.6	1627.7	1660.3	1701.1	1713.2
30°	1548.8	1576.6	1616.6	1660.3	1673.3
32.5°	1491.2	1523.7	1568.3	1616.6	1631.5
35°	1431.7	1468.9	1520.0	1572.0	1588.7
37.5°	1373.2	1410.3	1470.7	1525.5	1541.3
40°	1310.0	1350.9	1416.8	1475.4	1497.7
42.5°	1243.1	1291.4	1361.1	1426.1	1447.5
45°	1176.2	1229.2	1304.4	1374.1	1397.3
47.5°	1108.4	1166.9	1249.6	1320.2	1347.2
50°	1040.6	1102.8	1189.2	1265.4	1293.3
52.5°	971.8	1036.8	1130.7	1211.5	1236.6
55°	906.8	970.9	1068.4	1148.3	1179.9
57.5°	831.5	904.0	1007.1	1087.9	1118.6
60°	763.7	834.3	938.4	1023.8	1057.3
62.5°	690.3	762.8	872.4	957.9	990.4
65°	619.7	694.0	802.7	888.2	920.7
67.5°	543.5	621.6	733.0	815.7	847.3
70°	475.7	549.1	658.7	743.3	774.8
72.5°	393.0	476.6	581.6	665.2	699.6
75°	322.4	405.1	505.4	585.3	605.8
77.5°	248.1	330.8	430.2	482.2	496.1
80°	182.1	260.1	340.0	367.9	368.8
82.5°	122.6	191.4	236.9	250.9	249.0
85°	67.8	117.1	129.1	125.4	121.7
87.5°	27.9	39.0	31.6	22.3	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)