

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: P474486

Luminaire Tested: **24CZ2-55VHE-HRP-UNV-L840-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474486  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-55VHE-HRP-UNV-L840-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP  
INSERT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4543.6 lumens  
Efficiency: N/A  
Efficacy: 122.5 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

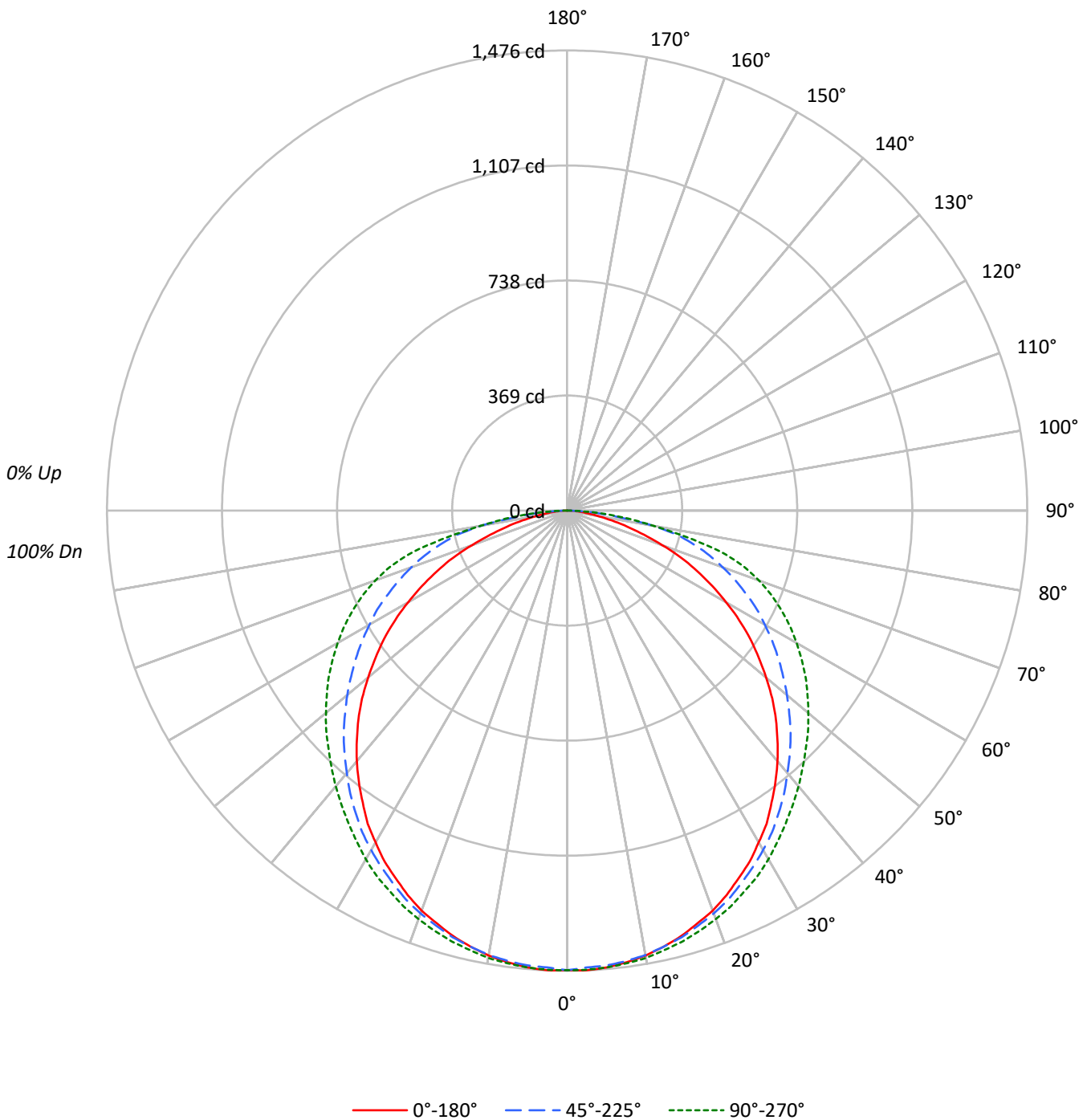
Input Watts (W): 37.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24

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

	0°	45°	90°
0°	1984	1984	1984
5°	1986	1978	1986
10°	1980	1978	1991
15°	1969	1974	1992
20°	1956	1969	1996
25°	1931	1960	1999
30°	1909	1953	2007
35°	1878	1943	2009
40°	1844	1931	2028
45°	1802	1929	2059
50°	1744	1927	2114
55°	1682	1941	2191
60°	1587	1971	2288
65°	1465	2017	2416
70°	1279	2087	2574
75°	1038	2195	2660
80°	767	2152	2152
85°	588	1585	1791



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.6	3.1
10°-20°	401.0	8.8
20°-30°	610.5	13.4
30°-40°	741.3	16.3
40°-50°	783.2	17.2
50°-60°	739.0	16.3
60°-70°	614.5	13.5
70°-80°	404.3	8.9
80°-90°	110.2	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°	1151.2	25.3
0°-40°	1892.5	41.7
0°-60°	3414.7	75.2
0°-90°	4543.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4543.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1474	1474	1474	1474	1474	
5°	1470	1470	1465	1470	1470	140
15°	1413	1415	1417	1430	1430	399
25°	1301	1309	1320	1343	1347	600
35°	1143	1156	1183	1214	1223	716
45°	947	966	1014	1063	1082	729
55°	717	748	827	906	934	639
65°	460	514	634	727	759	455
75°	200	291	422	500	512	215
85°	38	84	103	114	116	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1474.2	1474.2	1474.2	1474.2	1474.2
2.5°	1476.1	1474.2	1466.5	1474.2	1474.2
5°	1470.5	1470.5	1464.6	1470.5	1470.5
7.5°	1460.9	1460.9	1457.0	1464.6	1464.6
10°	1449.4	1449.4	1447.6	1457.0	1457.0
12.5°	1432.4	1434.1	1432.4	1443.7	1443.7
15°	1413.3	1415.2	1417.2	1430.4	1430.4
17.5°	1388.7	1392.4	1396.3	1411.3	1413.3
20°	1365.8	1367.6	1375.2	1392.4	1394.3
22.5°	1335.4	1341.0	1350.6	1367.6	1373.4
25°	1301.0	1308.6	1320.1	1343.0	1346.7
27.5°	1268.8	1274.4	1289.7	1314.5	1322.1
30°	1228.8	1238.3	1257.3	1282.1	1291.6
32.5°	1190.7	1200.3	1223.1	1249.7	1257.3
35°	1143.3	1156.5	1183.1	1213.5	1223.1
37.5°	1097.6	1110.8	1143.3	1177.4	1188.9
40°	1049.9	1065.2	1099.5	1139.3	1154.6
42.5°	998.6	1019.5	1057.5	1101.3	1118.5
45°	947.2	966.4	1013.8	1063.2	1082.3
47.5°	892.2	915.0	966.4	1025.3	1048.2
50°	833.2	861.7	920.7	985.3	1010.1
52.5°	774.3	806.5	873.1	945.3	972.0
55°	717.1	747.5	827.4	905.5	934.0
57.5°	654.4	692.5	779.9	863.5	892.2
60°	589.6	631.6	732.3	819.8	850.2
62.5°	525.0	572.6	686.6	774.3	806.5
65°	460.3	513.6	633.5	726.6	759.0
67.5°	397.5	456.4	583.9	677.2	709.5
70°	325.2	399.4	530.6	622.0	654.4
72.5°	258.7	344.4	479.3	565.0	593.5
75°	199.7	291.1	422.3	500.2	511.7
77.5°	146.4	237.8	363.3	389.9	391.8
80°	99.0	190.2	277.8	273.9	277.8
82.5°	64.6	142.7	174.9	196.0	197.8
85°	38.1	83.8	102.7	114.2	116.0
87.5°	18.9	28.5	36.1	38.1	41.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)