

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: P474378

Luminaire Tested: **24CZ2-75HE-HRP-UNV-L830-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474378  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-75HE-HRP-UNV-L830-CD1-U  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS W/ HRP INSERT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6087.6 lumens  
Efficiency: N/A  
Efficacy: 109.9 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

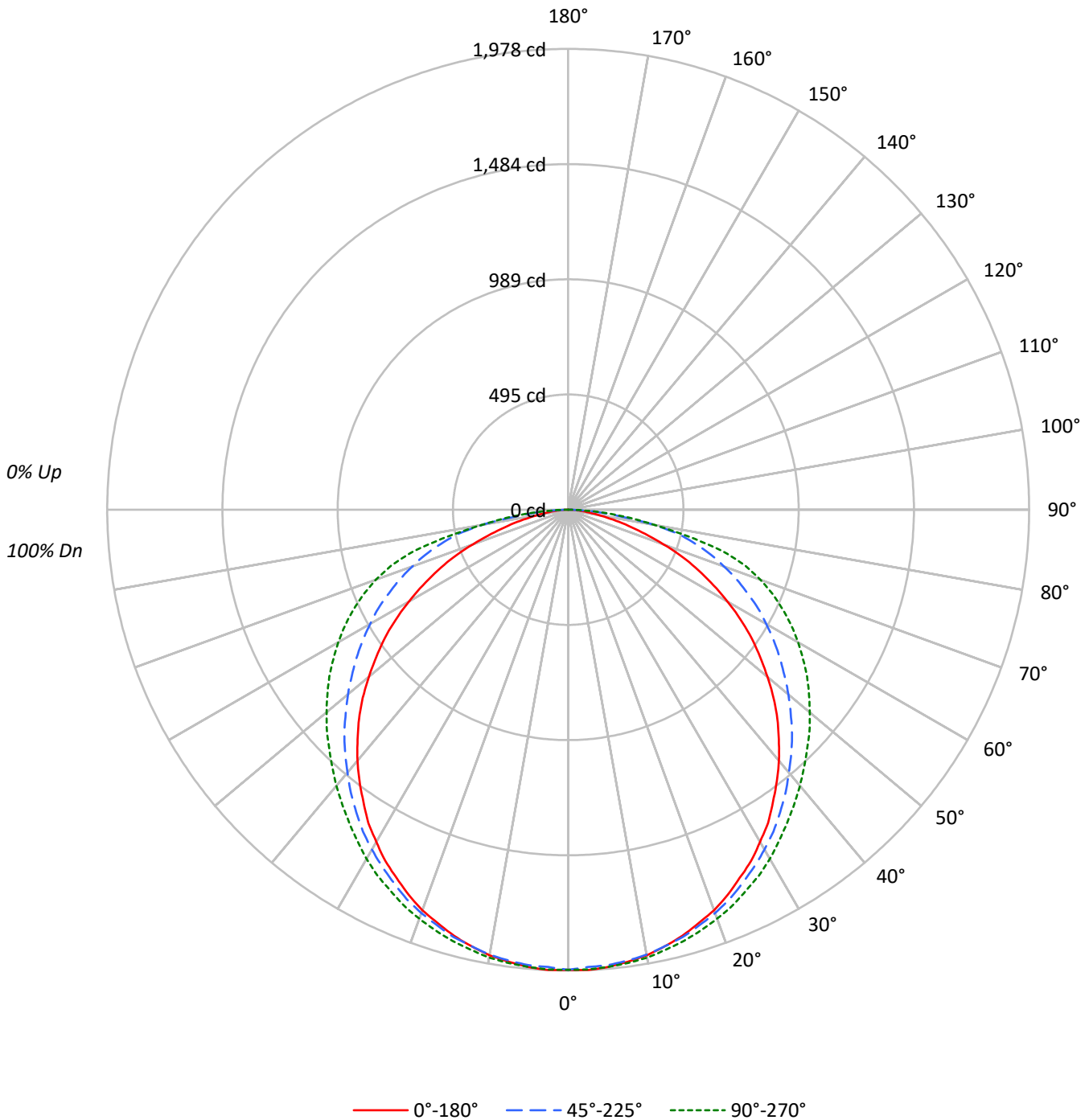
Input Watts (W): 55.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2657	2657	2657
5°	2661	2650	2661
10°	2653	2650	2667
15°	2638	2645	2670
20°	2620	2638	2675
25°	2588	2626	2679
30°	2558	2617	2689
35°	2516	2604	2692
40°	2471	2588	2717
45°	2415	2585	2759
50°	2337	2582	2833
55°	2254	2600	2935
60°	2126	2640	3065
65°	1964	2702	3238
70°	1714	2797	3449
75°	1391	2941	3564
80°	1027	2884	2884
85°	787	2124	2399



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	187.1	3.1
10°-20°	537.3	8.8
20°-30°	818.0	13.4
30°-40°	993.2	16.3
40°-50°	1049.3	17.2
50°-60°	990.1	16.3
60°-70°	823.3	13.5
70°-80°	541.6	8.9
80°-90°	147.6	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°	1542.4	25.3
0°-40°	2535.5	41.7
0°-60°	4575.0	75.2
0°-90°	6087.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6087.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1975	1975	1975	1975	1975	
5°	1970	1970	1962	1970	1970	187
15°	1894	1896	1899	1916	1916	534
25°	1743	1753	1769	1799	1804	804
35°	1532	1550	1585	1626	1639	959
45°	1269	1295	1358	1424	1450	977
55°	961	1002	1108	1213	1251	856
65°	617	688	849	974	1017	610
75°	268	390	566	670	686	288
85°	51	112	138	153	155	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1975.1	1975.1	1975.1	1975.1	1975.1
2.5°	1977.7	1975.1	1964.9	1975.1	1975.1
5°	1970.1	1970.1	1962.3	1970.1	1970.1
7.5°	1957.3	1957.3	1952.1	1962.3	1962.3
10°	1941.9	1941.9	1939.5	1952.1	1952.1
12.5°	1919.1	1921.5	1919.1	1934.3	1934.3
15°	1893.5	1896.1	1898.7	1916.5	1916.5
17.5°	1860.5	1865.5	1870.7	1890.9	1893.5
20°	1829.9	1832.3	1842.5	1865.5	1868.1
22.5°	1789.1	1796.7	1809.5	1832.3	1840.1
25°	1743.1	1753.3	1768.7	1799.3	1804.3
27.5°	1699.9	1707.5	1727.9	1761.1	1771.3
30°	1646.3	1659.1	1684.5	1717.7	1730.5
32.5°	1595.3	1608.1	1638.7	1674.3	1684.5
35°	1531.7	1549.5	1585.1	1625.9	1638.7
37.5°	1470.5	1488.3	1531.7	1577.5	1593.0
40°	1406.7	1427.1	1473.2	1526.5	1546.9
42.5°	1337.9	1365.9	1416.9	1475.5	1498.5
45°	1269.1	1294.8	1358.3	1424.5	1450.1
47.5°	1195.4	1226.0	1294.8	1373.8	1404.4
50°	1116.4	1154.6	1233.6	1320.1	1353.4
52.5°	1037.4	1080.5	1169.7	1266.5	1302.4
55°	960.7	1001.5	1108.5	1213.2	1251.3
57.5°	876.8	927.8	1045.0	1156.9	1195.4
60°	789.9	846.2	981.1	1098.3	1139.1
62.5°	703.4	767.2	919.9	1037.4	1080.5
65°	616.8	688.2	848.8	973.6	1017.0
67.5°	532.6	611.5	782.4	907.4	950.5
70°	435.8	535.2	710.9	833.4	876.8
72.5°	346.6	461.4	642.2	757.0	795.2
75°	267.6	390.0	565.8	670.1	685.6
77.5°	196.2	318.6	486.8	522.4	525.0
80°	132.6	254.8	372.2	367.0	372.2
82.5°	86.6	191.2	234.4	262.6	265.0
85°	51.0	112.2	137.6	153.0	155.4
87.5°	25.4	38.2	48.4	51.0	56.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)