

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: P474678

Luminaire Tested: **24CZ2-75HE-SQR-UNV-L840-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474678  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-75HE-SQR-UNV-L840-CD1-U  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SQUARE LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7538.6 lumens  
Efficiency: N/A  
Efficacy: 136.1 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

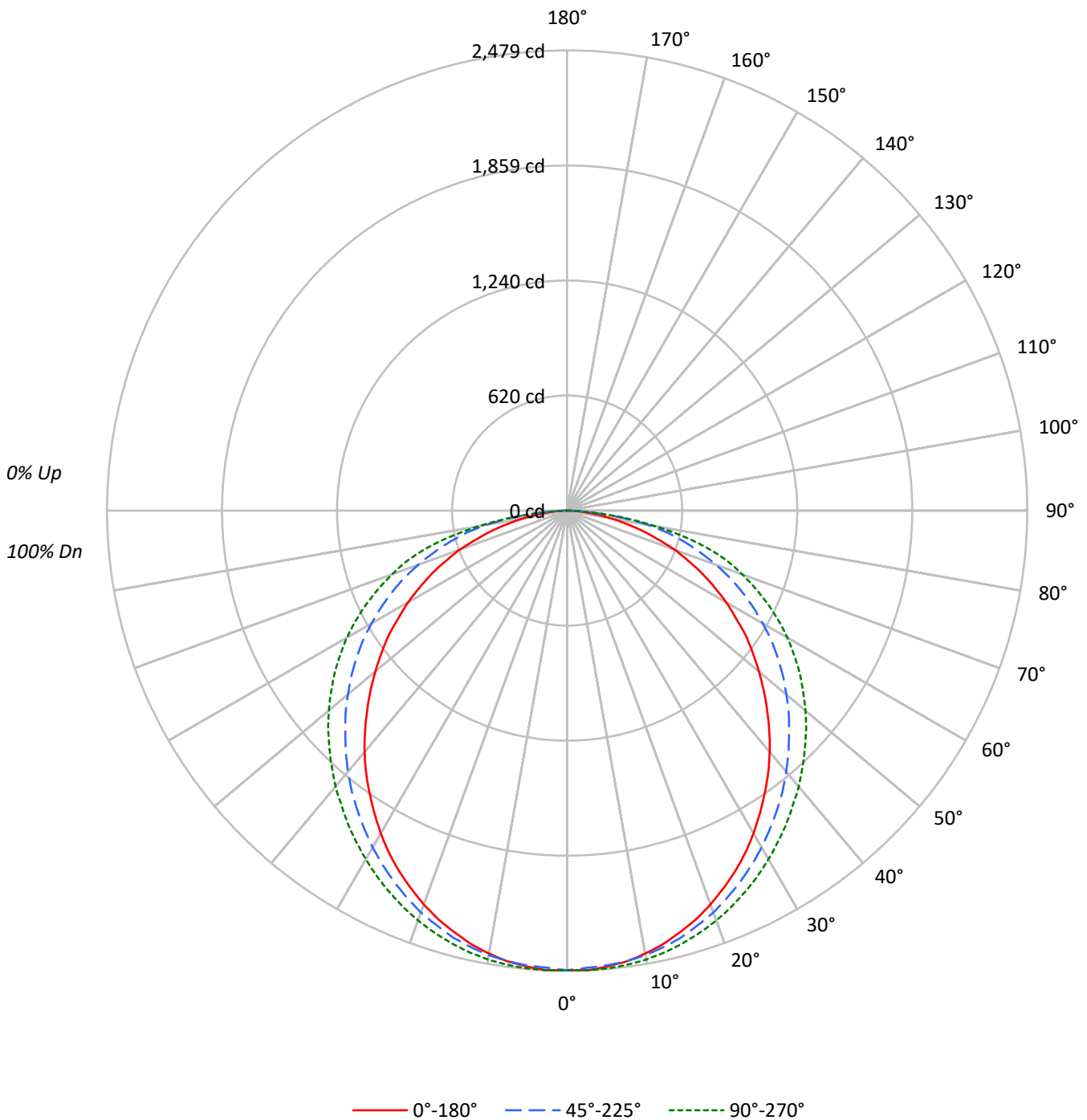
Input Watts (W): 55.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	6663	6663	6663
5°	6663	6643	6689
10°	6621	6644	6710
15°	6549	6630	6721
20°	6467	6598	6729
25°	6362	6551	6730
30°	6238	6512	6740
35°	6097	6473	6766
40°	5965	6452	6820
45°	5802	6435	6893
50°	5647	6454	7019
55°	5515	6498	7176
60°	5328	6547	7377
65°	5115	6626	7599
70°	4851	6718	7903
75°	4345	6812	8165
80°	3659	6831	7409
85°	2714	5169	4872



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	234.7	3.1
10°-20°	672.5	8.9
20°-30°	1018.1	13.5
30°-40°	1231.5	16.3
40°-50°	1300.0	17.2
50°-60°	1225.9	16.3
60°-70°	1010.7	13.4
70°-80°	663.0	8.8
80°-90°	182.3	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°	1925.2	25.5
0°-40°	3156.8	41.9
0°-60°	5682.6	75.4
0°-90°	7538.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7538.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2476	2476	2476	2476	2476	
5°	2467	2467	2459	2476	2476	234
15°	2351	2364	2380	2408	2412	663
25°	2143	2169	2206	2252	2267	987
35°	1856	1904	1970	2038	2060	1162
45°	1525	1593	1691	1781	1811	1177
55°	1176	1259	1385	1489	1530	1047
65°	803	900	1041	1151	1194	793
75°	418	525	655	759	785	442
85°	88	152	167	163	158	109
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2476.2	2476.2	2476.2	2476.2	2476.2
2.5°	2478.6	2476.2	2465.4	2479.8	2478.6
5°	2466.6	2466.6	2459.3	2476.2	2476.2
7.5°	2449.7	2450.9	2448.5	2467.8	2467.8
10°	2423.2	2428.0	2431.6	2453.3	2455.7
12.5°	2391.9	2400.3	2407.6	2434.0	2436.5
15°	2350.9	2364.2	2379.9	2407.6	2412.4
17.5°	2308.8	2324.5	2341.3	2377.4	2383.5
20°	2258.2	2276.3	2304.0	2340.1	2349.7
22.5°	2201.6	2226.9	2255.8	2299.2	2311.2
25°	2142.6	2169.1	2206.4	2252.2	2266.6
27.5°	2078.8	2110.1	2152.2	2205.2	2220.9
30°	2007.7	2043.8	2095.6	2152.2	2169.1
32.5°	1933.0	1975.2	2033.0	2095.6	2114.9
35°	1855.9	1904.1	1970.4	2037.8	2059.5
37.5°	1780.1	1828.2	1906.5	1977.6	1998.1
40°	1698.2	1751.2	1836.7	1912.6	1941.5
42.5°	1611.5	1674.1	1764.4	1848.7	1876.4
45°	1524.7	1593.4	1690.9	1781.3	1811.4
47.5°	1436.8	1512.7	1619.9	1711.4	1746.3
50°	1348.9	1429.6	1541.6	1640.4	1676.5
52.5°	1259.8	1344.1	1465.7	1570.5	1603.0
55°	1175.5	1258.6	1385.0	1488.6	1529.6
57.5°	1077.9	1171.9	1305.5	1410.3	1450.1
60°	990.0	1081.5	1216.4	1327.2	1370.6
62.5°	894.9	988.8	1130.9	1241.7	1283.9
65°	803.3	899.7	1040.6	1151.4	1193.5
67.5°	704.6	805.7	950.3	1057.4	1098.4
70°	616.6	711.8	853.9	963.5	1004.5
72.5°	509.5	617.8	753.9	862.3	906.9
75°	417.9	525.1	655.2	758.8	785.3
77.5°	321.6	428.8	557.6	625.1	643.1
80°	236.1	337.2	440.8	476.9	478.1
82.5°	159.0	248.1	307.1	325.2	322.8
85°	87.9	151.8	167.4	162.6	157.8
87.5°	36.1	50.6	40.9	28.9	22.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)