

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: P295082

Luminaire Tested: **24CZ2-75HE-HRP-UNV-L950-CD1-U**

Issue Date: 12/2/2019

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P295082  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-75HE-HRP-UNV-L950-CD1-U  
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS  
Light Source: (392) 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5333.4 lumens  
Efficiency: N/A  
Efficacy: 96.3 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

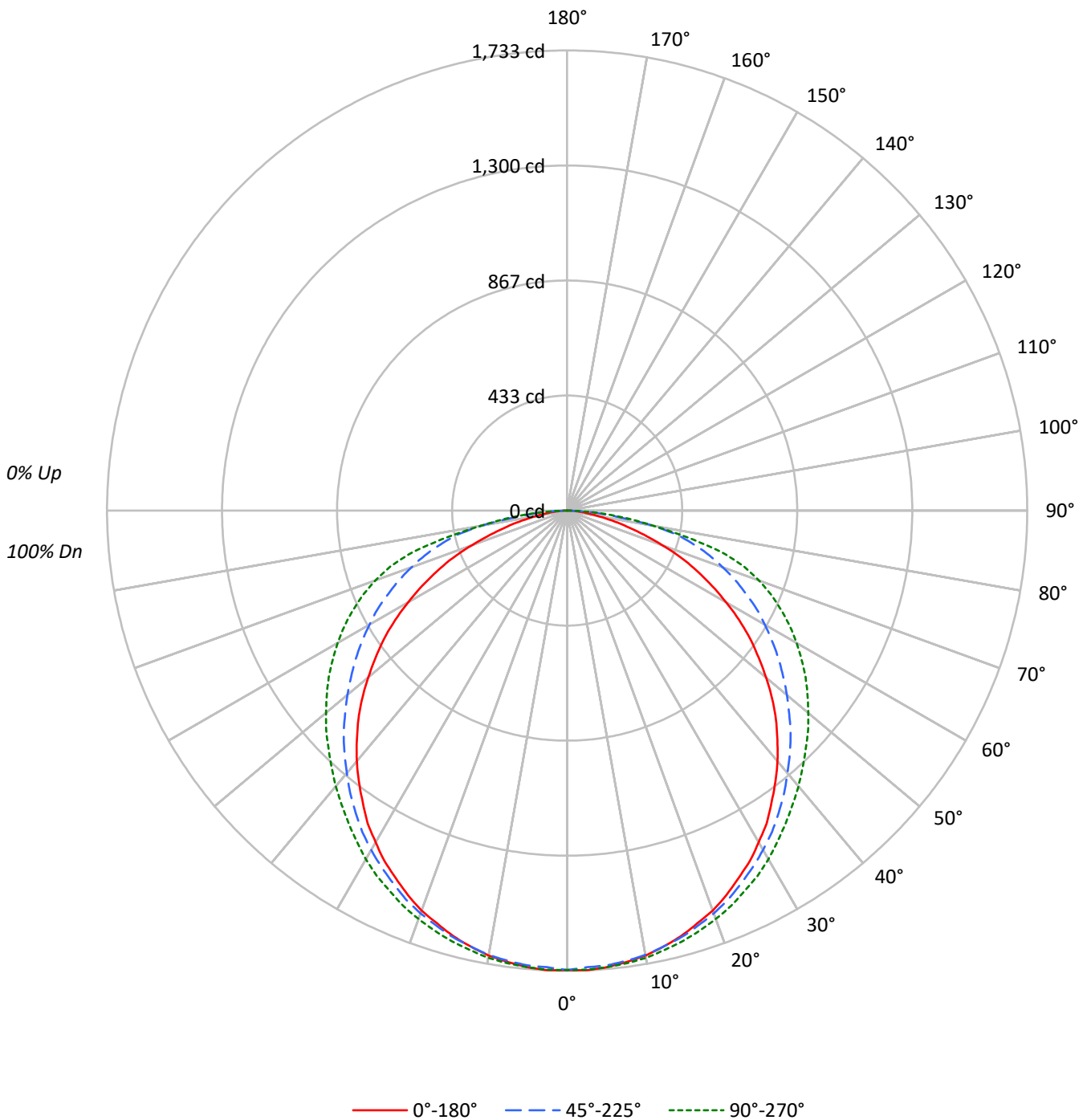
Input Watts (W): 55.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2328	2328	2328
5°	2331	2322	2331
10°	2325	2322	2337
15°	2311	2317	2339
20°	2295	2311	2343
25°	2267	2301	2347
30°	2241	2293	2355
35°	2204	2281	2358
40°	2165	2267	2380
45°	2116	2265	2418
50°	2047	2262	2482
55°	1975	2278	2572
60°	1863	2313	2686
65°	1720	2367	2836
70°	1502	2450	3022
75°	1219	2577	3122
80°	900	2526	2526
85°	690	1862	2103



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	163.9	3.1
10°-20°	470.7	8.8
20°-30°	716.6	13.4
30°-40°	870.1	16.3
40°-50°	919.3	17.2
50°-60°	867.5	16.3
60°-70°	721.3	13.5
70°-80°	474.5	8.9
80°-90°	129.4	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°	1351.3	25.3
0°-40°	2221.4	41.7
0°-60°	4008.2	75.2
0°-90°	5333.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5333.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1730	1730	1730	1730	1730	
5°	1726	1726	1719	1726	1726	164
15°	1659	1661	1663	1679	1679	468
25°	1527	1536	1550	1576	1581	704
35°	1342	1358	1389	1424	1436	840
45°	1112	1134	1190	1248	1270	856
55°	842	878	971	1063	1096	750
65°	540	603	744	853	891	534
75°	234	342	496	587	601	253
85°	45	98	121	134	136	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1730.4	1730.4	1730.4	1730.4	1730.4
2.5°	1732.6	1730.4	1721.5	1730.4	1730.4
5°	1725.9	1725.9	1719.2	1725.9	1725.9
7.5°	1714.8	1714.8	1710.3	1719.2	1719.2
10°	1701.4	1701.4	1699.2	1710.3	1710.3
12.5°	1681.3	1683.5	1681.3	1694.7	1694.7
15°	1659.0	1661.2	1663.4	1679.1	1679.1
17.5°	1629.9	1634.4	1638.9	1656.7	1659.0
20°	1603.1	1605.4	1614.3	1634.4	1636.6
22.5°	1567.4	1574.1	1585.3	1605.4	1612.1
25°	1527.2	1536.2	1549.6	1576.4	1580.8
27.5°	1489.3	1496.0	1513.8	1542.9	1551.8
30°	1442.4	1453.5	1475.9	1504.9	1516.1
32.5°	1397.7	1408.9	1435.7	1466.9	1475.9
35°	1341.9	1357.5	1388.8	1424.5	1435.7
37.5°	1288.3	1303.9	1341.9	1382.1	1395.5
40°	1232.5	1250.4	1290.6	1337.4	1355.3
42.5°	1172.2	1196.8	1241.4	1292.8	1312.9
45°	1111.9	1134.3	1190.1	1248.1	1270.5
47.5°	1047.2	1074.0	1134.3	1203.5	1230.3
50°	978.0	1011.5	1080.7	1156.6	1185.6
52.5°	908.7	946.7	1024.9	1109.7	1141.0
55°	841.8	877.5	971.3	1062.8	1096.3
57.5°	768.1	812.7	915.4	1013.7	1047.2
60°	692.2	741.3	859.6	962.3	998.1
62.5°	616.3	672.1	806.0	908.7	946.7
65°	540.3	602.9	743.5	852.9	890.9
67.5°	466.7	535.9	685.5	794.9	832.8
70°	381.8	468.9	622.9	730.1	768.1
72.5°	303.7	404.1	562.7	663.1	696.6
75°	234.4	341.6	495.7	587.2	600.6
77.5°	171.9	279.1	426.5	457.7	460.0
80°	116.1	223.3	326.0	321.5	326.0
82.5°	75.9	167.5	205.4	230.0	232.2
85°	44.7	98.2	120.6	134.0	136.2
87.5°	22.3	33.5	42.4	44.7	49.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)