

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: P295042

Luminaire Tested: **24CZ2-45-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: P295042
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: 24CZ2-45-HRP-UNV-L950-CD1-U
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (84) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3252.6 lumens
Efficiency: N/A
Efficacy: 75.8 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

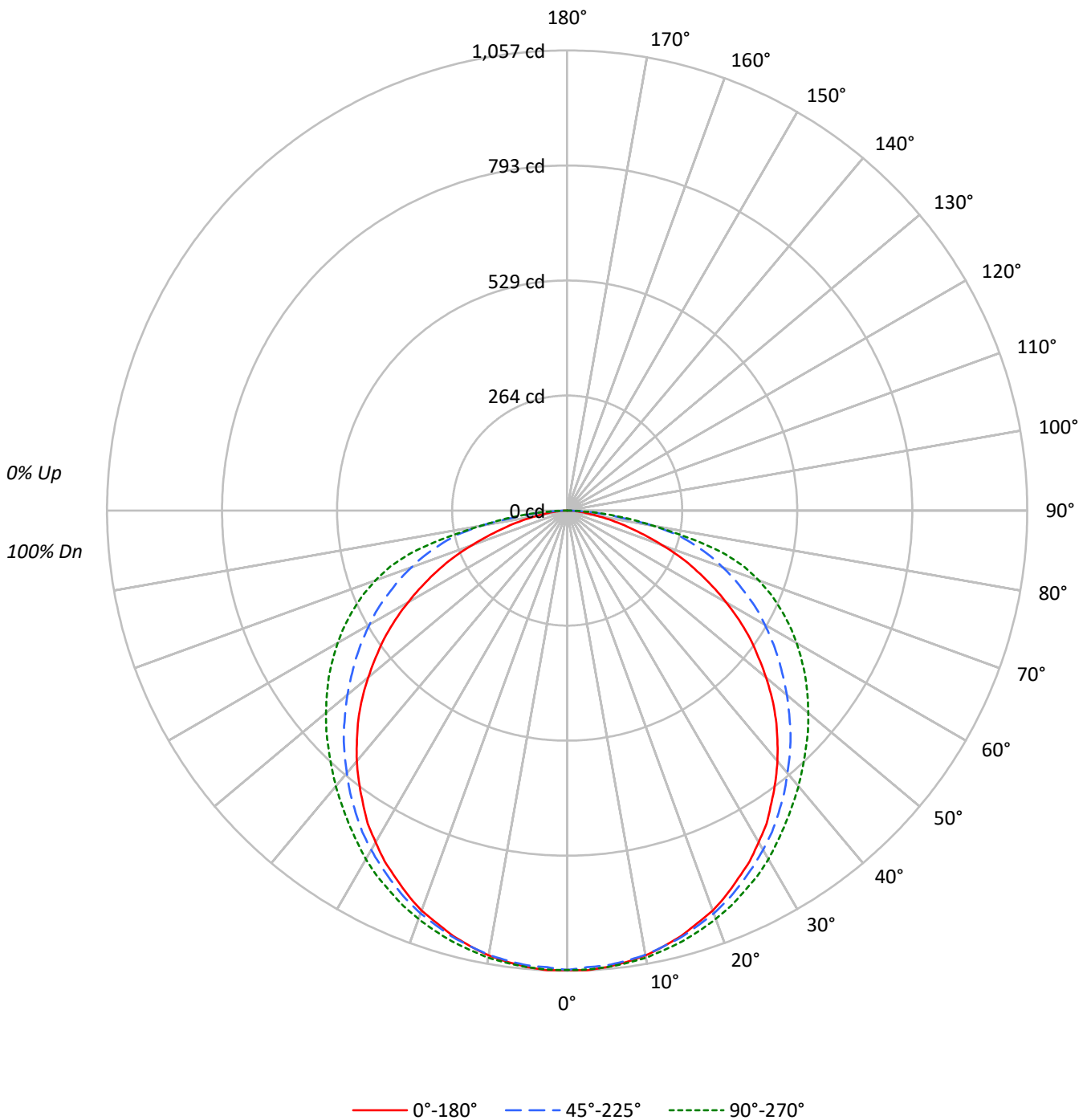
Input Watts (W): 42.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82					82			
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67					67			
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56					56			
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48					48			
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41					41			
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36					36			
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28					28			
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25					25			
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23					23			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1420	1420	1420
5°	1422	1416	1422
10°	1418	1416	1425
15°	1409	1413	1426
20°	1400	1410	1429
25°	1383	1403	1431
30°	1367	1398	1436
35°	1344	1391	1438
40°	1320	1382	1452
45°	1290	1381	1474
50°	1248	1380	1514
55°	1204	1389	1568
60°	1136	1411	1638
65°	1049	1443	1730
70°	916	1495	1843
75°	743	1572	1904
80°	549	1540	1540
85°	420	1135	1283



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.0	3.1
10°-20°	287.1	8.8
20°-30°	437.0	13.4
30°-40°	530.7	16.3
40°-50°	560.6	17.2
50°-60°	529.0	16.3
60°-70°	439.9	13.5
70°-80°	289.4	8.9
80°-90°	78.9	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°	824.1	25.3
0°-40°	1354.8	41.7
0°-60°	2444.4	75.2
0°-90°	3252.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3252.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1055	1055	1055	1055	1055	
5°	1053	1053	1048	1053	1053	100
15°	1012	1013	1014	1024	1024	285
25°	931	937	945	961	964	430
35°	818	828	847	869	876	512
45°	678	692	726	761	775	522
55°	513	535	592	648	669	457
65°	330	368	453	520	543	326
75°	143	208	302	358	366	154
85°	27	60	74	82	83	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1055.3	1055.3	1055.3	1055.3	1055.3
2.5°	1056.7	1055.3	1049.9	1055.3	1055.3
5°	1052.6	1052.6	1048.5	1052.6	1052.6
7.5°	1045.8	1045.8	1043.0	1048.5	1048.5
10°	1037.6	1037.6	1036.2	1043.0	1043.0
12.5°	1025.3	1026.7	1025.3	1033.5	1033.5
15°	1011.7	1013.1	1014.5	1024.0	1024.0
17.5°	994.0	996.8	999.5	1010.4	1011.7
20°	977.7	979.0	984.5	996.8	998.1
22.5°	955.9	960.0	966.8	979.0	983.1
25°	931.4	936.8	945.0	961.3	964.1
27.5°	908.2	912.3	923.2	940.9	946.4
30°	879.6	886.5	900.1	917.8	924.6
32.5°	852.4	859.2	875.6	894.6	900.1
35°	818.4	827.9	847.0	868.8	875.6
37.5°	785.7	795.2	818.4	842.9	851.1
40°	751.6	762.5	787.1	815.6	826.5
42.5°	714.9	729.9	757.1	788.4	800.7
45°	678.1	691.7	725.8	761.2	774.8
47.5°	638.6	655.0	691.7	733.9	750.3
50°	596.4	616.8	659.1	705.4	723.1
52.5°	554.2	577.4	625.0	676.8	695.8
55°	513.4	535.1	592.3	648.2	668.6
57.5°	468.4	495.7	558.3	618.2	638.6
60°	422.1	452.1	524.2	586.9	608.7
62.5°	375.8	409.9	491.6	554.2	577.4
65°	329.5	367.7	453.4	520.2	543.3
67.5°	284.6	326.8	418.0	484.8	507.9
70°	232.8	286.0	379.9	445.3	468.4
72.5°	185.2	246.5	343.1	404.4	424.8
75°	143.0	208.3	302.3	358.1	366.3
77.5°	104.8	170.2	260.1	279.1	280.5
80°	70.8	136.2	198.8	196.1	198.8
82.5°	46.3	102.1	125.3	140.3	141.6
85°	27.2	59.9	73.5	81.7	83.1
87.5°	13.6	20.4	25.9	27.2	30.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)