

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: P295040

Luminaire Tested: **24CZ2-45-HRP-UNV-L935-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: P295040
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-L935-CD1-U
Description: 2'x4' TROFFER LED MODULE, HIGH EFFICIENCY ROUND PERF. LENS
Light Source: (84) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment: Sample No. Condition Description

Summary

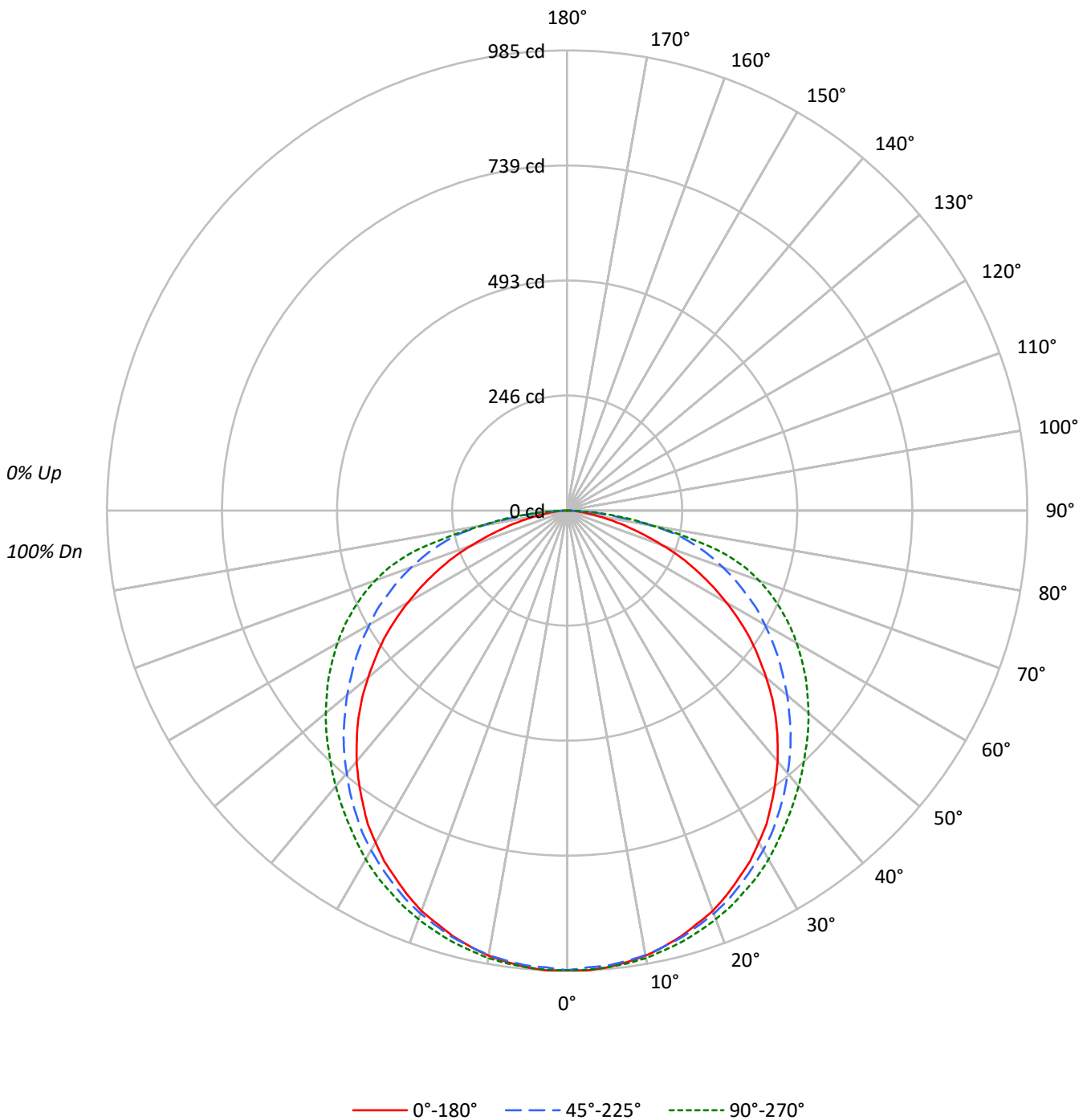
Lumens per Lamp: N/A
Luminaire Lumens: 3033.0 lumens
Efficiency: N/A
Efficacy: 70.7 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	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°	1324	1324	1324
5°	1326	1321	1326
10°	1322	1320	1329
15°	1314	1318	1330
20°	1305	1314	1333
25°	1289	1308	1335
30°	1274	1304	1340
35°	1253	1297	1341
40°	1231	1289	1354
45°	1203	1288	1375
50°	1164	1286	1411
55°	1123	1296	1462
60°	1059	1315	1527
65°	978	1346	1613
70°	854	1394	1718
75°	693	1465	1776
80°	511	1437	1437
85°	392	1059	1196



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.2	3.1
10°-20°	267.7	8.8
20°-30°	407.5	13.4
30°-40°	494.8	16.3
40°-50°	522.8	17.2
50°-60°	493.3	16.3
60°-70°	410.2	13.5
70°-80°	269.9	8.9
80°-90°	73.6	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°	768.4	25.3
0°-40°	1263.3	41.7
0°-60°	2279.4	75.2
0°-90°	3033.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3033.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	984	984	984	984	984	
5°	982	982	978	982	982	93
15°	943	945	946	955	955	266
25°	868	874	881	896	899	401
35°	763	772	790	810	816	478
45°	632	645	677	710	722	487
55°	479	499	552	604	623	426
65°	307	343	423	485	507	304
75°	133	194	282	334	342	144
85°	25	56	69	76	78	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	984.0	984.0	984.0	984.0	984.0
2.5°	985.3	984.0	979.0	984.0	984.0
5°	981.5	981.5	977.7	981.5	981.5
7.5°	975.2	975.2	972.6	977.7	977.7
10°	967.5	967.5	966.3	972.6	972.6
12.5°	956.1	957.4	956.1	963.7	963.7
15°	943.4	944.7	946.0	954.8	954.8
17.5°	926.9	929.4	932.0	942.1	943.4
20°	911.7	912.9	918.0	929.4	930.7
22.5°	891.4	895.2	901.5	912.9	916.7
25°	868.5	873.6	881.2	896.4	899.0
27.5°	846.9	850.7	860.9	877.4	882.5
30°	820.2	826.6	839.3	855.8	862.2
32.5°	794.9	801.2	816.4	834.2	839.3
35°	763.1	772.0	789.8	810.1	816.4
37.5°	732.6	741.5	763.1	786.0	793.6
40°	700.9	711.1	733.9	760.6	770.7
42.5°	666.6	680.6	706.0	735.2	746.6
45°	632.3	645.0	676.8	709.8	722.5
47.5°	595.5	610.7	645.0	684.4	699.6
50°	556.1	575.2	614.6	657.7	674.2
52.5°	516.8	538.4	582.8	631.1	648.8
55°	478.7	499.0	552.3	604.4	623.4
57.5°	436.8	462.2	520.6	576.5	595.5
60°	393.6	421.6	488.8	547.3	567.6
62.5°	350.4	382.2	458.4	516.8	538.4
65°	307.3	342.8	422.8	485.0	506.6
67.5°	265.4	304.7	389.8	452.0	473.6
70°	217.1	266.6	354.3	415.2	436.8
72.5°	172.7	229.8	320.0	377.1	396.2
75°	133.3	194.3	281.9	333.9	341.6
77.5°	97.8	158.7	242.5	260.3	261.6
80°	66.0	127.0	185.4	182.8	185.4
82.5°	43.2	95.2	116.8	130.8	132.1
85°	25.4	55.9	68.6	76.2	77.5
87.5°	12.7	19.0	24.1	25.4	27.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)