

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: P230453

Luminaire Tested: **24CZ-LD5-60SE-SQP-UNV-L935-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230453
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25695)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-60SE-SQP-UNV-L935-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH SQP LENS
Light Source: (84) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3545.2 lumens
Efficiency: N/A
Efficacy: 59.1 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.31 / 1.42
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

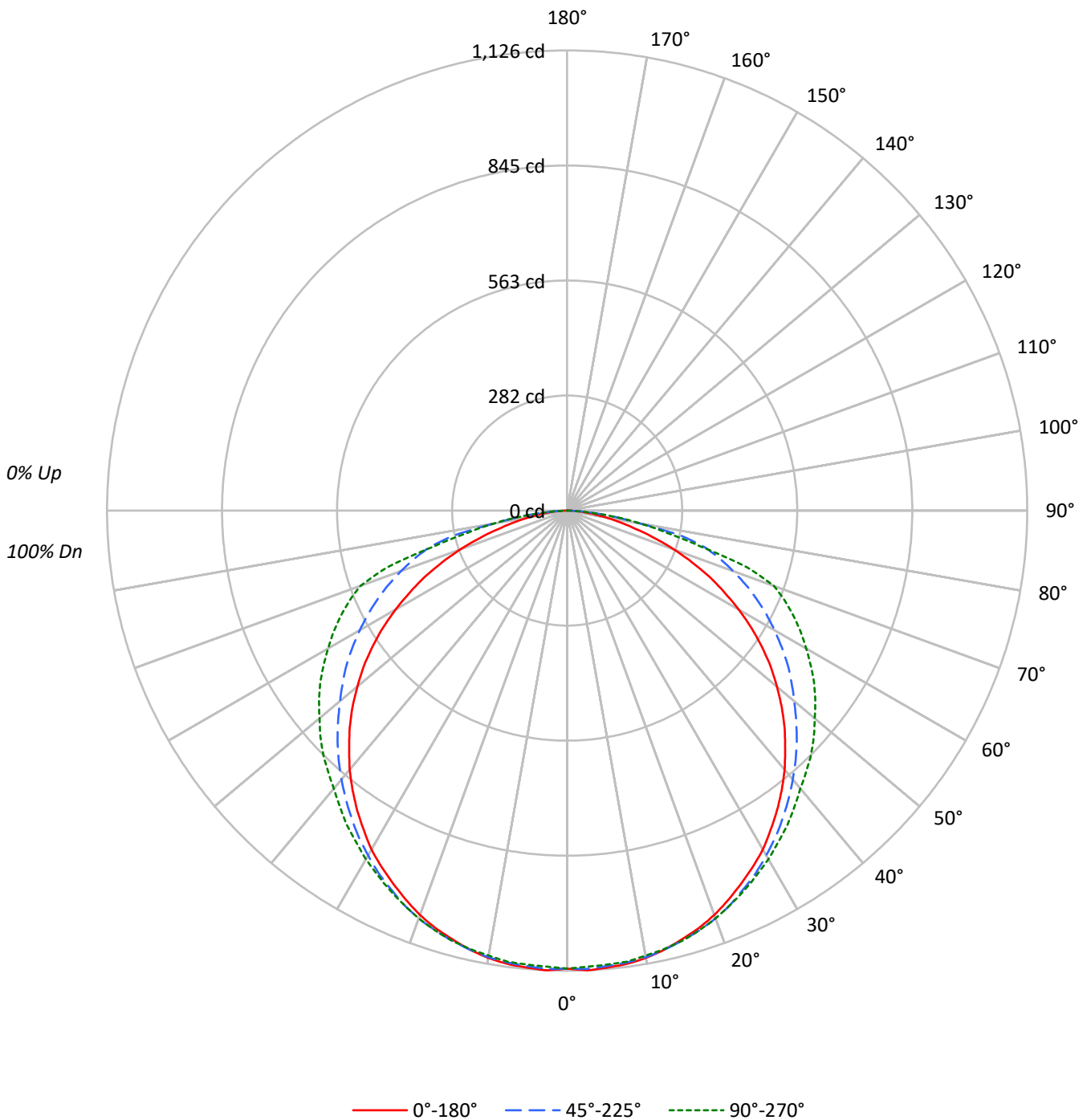
Input Watts (W): 60
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	97	93	96	93	90	92	90	87	89	87	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	60	70	64	59	67	63	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	51	45	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	29	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	51	38	30	24	50	37	30	24	36	29	24	35	29	24	35	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1508	1508	1508
5°	1516	1511	1506
10°	1519	1516	1511
15°	1513	1518	1518
20°	1508	1521	1521
25°	1495	1517	1522
30°	1488	1514	1531
35°	1471	1510	1543
40°	1454	1508	1560
45°	1432	1512	1606
50°	1403	1518	1656
55°	1366	1546	1731
60°	1306	1577	1818
65°	1224	1627	1947
70°	1095	1700	2118
75°	905	1818	1751
80°	738	1405	1419
85°	594	932	877



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.4	3.0
10°-20°	307.1	8.7
20°-30°	469.4	13.2
30°-40°	574.1	16.2
40°-50°	614.3	17.3
50°-60°	588.2	16.6
60°-70°	497.6	14.0
70°-80°	315.4	8.9
80°-90°	72.6	2.0
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°	883.0	24.9
0°-40°	1457.1	41.1
0°-60°	2659.6	75.0
0°-90°	3545.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3545.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1121	1121	1121	1121	1121	
5°	1122	1117	1119	1117	1115	107
15°	1086	1084	1090	1090	1090	307
25°	1007	1007	1022	1026	1026	465
35°	896	901	919	932	939	560
45°	753	765	795	828	844	580
55°	582	601	659	714	738	519
65°	385	421	511	580	612	379
75°	174	245	350	348	337	189
85°	38	59	60	55	57	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1120.7	1120.7	1120.7	1120.7	1120.7
2.5°	1126.2	1120.7	1122.5	1120.7	1117.0
5°	1122.5	1117.0	1118.9	1117.0	1115.2
7.5°	1118.9	1113.4	1115.2	1113.4	1113.4
10°	1111.5	1106.0	1109.7	1107.9	1106.0
12.5°	1100.6	1096.9	1100.6	1098.7	1098.7
15°	1085.9	1084.1	1089.6	1089.6	1089.6
17.5°	1071.3	1069.4	1076.8	1076.8	1076.8
20°	1052.9	1051.1	1062.1	1062.1	1062.1
22.5°	1031.0	1029.1	1043.8	1043.8	1043.8
25°	1007.2	1007.2	1021.8	1025.5	1025.5
27.5°	983.4	983.4	999.8	1005.3	1005.3
30°	957.7	957.7	974.2	981.5	985.2
32.5°	926.6	930.3	948.6	957.7	961.4
35°	895.5	901.0	919.3	932.1	939.4
37.5°	862.5	868.0	890.0	904.6	913.8
40°	827.7	835.0	858.8	877.1	888.1
42.5°	789.3	800.2	827.7	851.5	866.2
45°	752.6	765.4	794.7	827.7	844.2
47.5°	712.3	727.0	760.0	802.1	818.6
50°	670.2	684.9	725.2	772.8	791.1
52.5°	628.1	644.6	692.2	743.5	765.4
55°	582.3	600.6	659.2	714.2	738.0
57.5°	534.7	556.7	622.6	681.2	706.8
60°	485.3	512.7	586.0	648.2	675.7
62.5°	434.0	467.0	549.4	615.3	644.6
65°	384.6	421.2	510.9	580.5	611.6
67.5°	331.4	377.2	472.5	547.5	576.8
70°	278.3	331.4	432.2	509.1	538.4
72.5°	225.2	289.3	391.9	461.5	461.5
75°	174.0	245.4	349.8	347.9	336.9
77.5°	131.8	205.1	287.5	245.4	247.2
80°	95.2	164.8	181.3	181.3	183.1
82.5°	64.1	126.4	117.2	115.4	119.0
85°	38.5	58.6	60.4	54.9	56.8
87.5°	18.3	20.1	16.5	11.0	11.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)