

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: P230074

Luminaire Tested: **24CZ-LD5-35SE-S-UNV-L940-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230074
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P25694)
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ-LD5-35SE-S-UNV-L940-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH SMOOTH LENS
Light Source: (84) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3178.0 lumens
Efficiency: N/A
Efficacy: 111.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.33
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

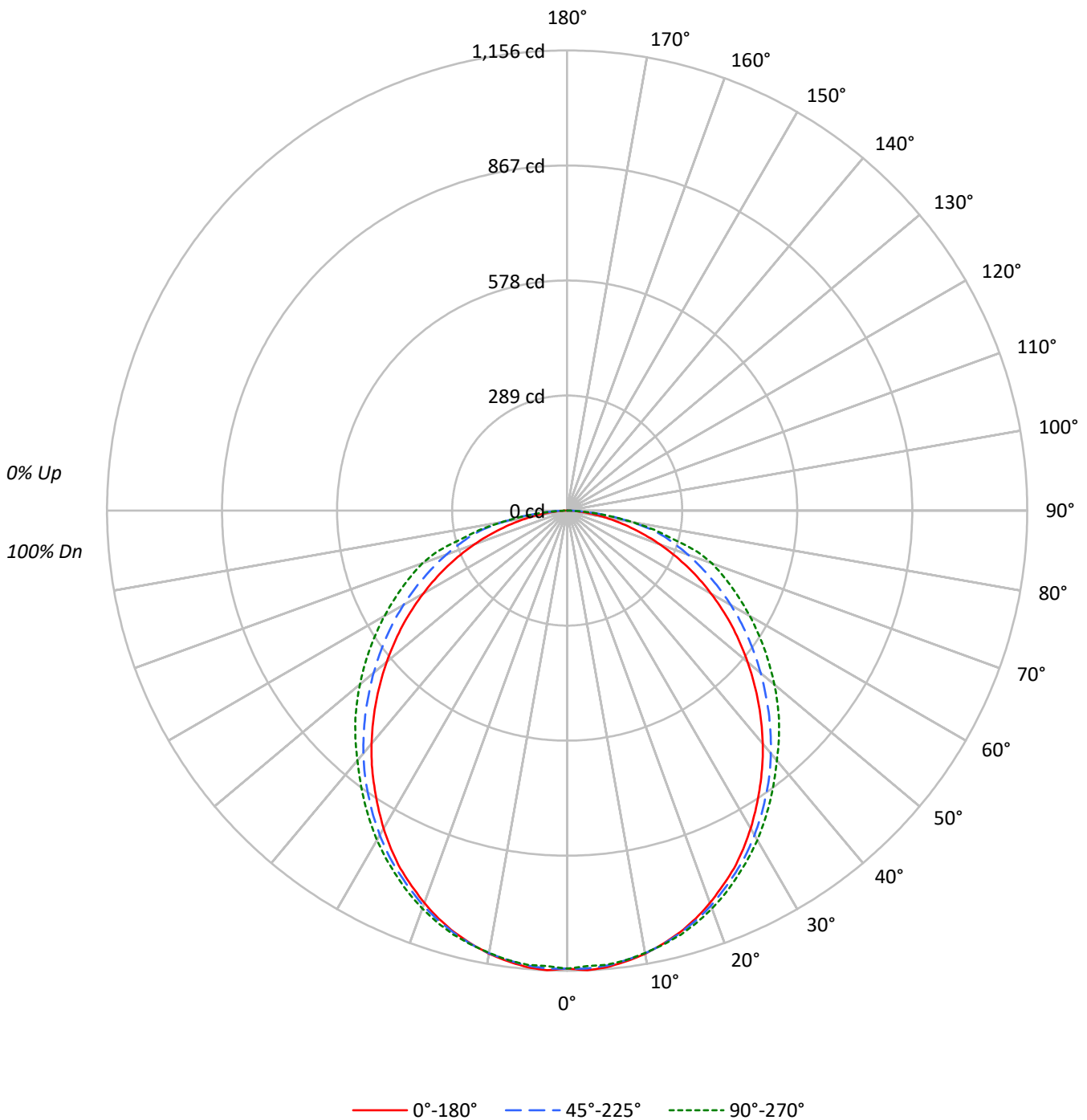
Input Watts (W): 28.57
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	104	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	64	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	52	62	56	52	50
5	76	63	53	47	73	61	53	47	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1548	1548	1548
5°	1555	1550	1547
10°	1544	1543	1542
15°	1528	1530	1536
20°	1502	1513	1523
25°	1473	1488	1504
30°	1433	1462	1485
35°	1388	1431	1461
40°	1343	1399	1439
45°	1292	1362	1433
50°	1240	1328	1423
55°	1186	1300	1419
60°	1124	1278	1426
65°	1057	1262	1454
70°	973	1269	1522
75°	863	1314	1418
80°	721	1245	1278
85°	539	996	914



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.8	3.4
10°-20°	309.4	9.7
20°-30°	461.0	14.5
30°-40°	542.7	17.1
40°-50°	551.5	17.4
50°-60°	495.8	15.6
60°-70°	391.7	12.3
70°-80°	248.5	7.8
80°-90°	68.6	2.2
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°	879.2	27.7
0°-40°	1421.8	44.7
0°-60°	2469.2	77.7
0°-90°	3178.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3178.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1150	1150	1150	1150	1150	
5°	1152	1142	1147	1145	1145	109
15°	1097	1091	1099	1102	1103	309
25°	992	991	1002	1009	1013	456
35°	845	850	871	881	889	529
45°	679	688	716	737	753	524
55°	506	518	554	590	605	451
65°	332	349	396	440	457	329
75°	166	195	253	275	273	177
85°	35	60	64	59	59	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1150.5	1150.5	1150.5	1150.5	1150.5
2.5°	1155.8	1147.3	1151.6	1149.4	1145.2
5°	1151.6	1142.0	1147.3	1145.2	1145.2
7.5°	1142.0	1134.6	1138.9	1137.8	1138.9
10°	1130.4	1123.0	1129.3	1129.3	1128.3
12.5°	1114.5	1108.2	1115.6	1115.6	1116.7
15°	1096.6	1091.3	1098.7	1101.9	1102.9
17.5°	1074.4	1069.1	1078.6	1081.8	1084.9
20°	1049.0	1046.9	1056.4	1059.6	1063.8
22.5°	1020.4	1020.4	1029.9	1034.2	1040.5
25°	991.9	990.8	1002.5	1008.8	1013.0
27.5°	958.0	959.1	973.9	980.2	985.5
30°	922.1	924.2	941.1	948.5	955.9
32.5°	884.0	888.2	907.3	915.7	923.1
35°	844.9	850.2	871.3	880.8	889.3
37.5°	805.8	813.2	835.4	844.9	854.4
40°	764.5	770.9	796.3	807.9	819.5
42.5°	722.2	730.7	756.1	773.0	786.7
45°	678.9	688.4	715.9	737.0	752.9
47.5°	635.5	648.2	674.6	703.2	716.9
50°	592.2	604.9	634.5	666.2	679.9
52.5°	547.8	560.4	594.3	627.1	641.9
55°	505.5	518.1	554.1	590.1	604.9
57.5°	461.0	474.8	515.0	552.0	566.8
60°	417.7	431.4	474.8	513.9	529.8
62.5°	375.4	390.2	435.7	476.9	492.8
65°	332.0	349.0	396.5	439.9	456.8
67.5°	289.7	308.8	358.5	403.9	421.9
70°	247.4	269.6	322.5	369.0	387.0
72.5°	206.2	230.5	286.6	333.1	342.6
75°	166.0	194.6	252.7	274.9	272.8
77.5°	128.0	159.7	214.7	218.9	225.2
80°	93.1	128.0	160.7	169.2	165.0
82.5°	61.3	96.2	115.3	111.0	110.0
85°	34.9	60.3	64.5	59.2	59.2
87.5°	14.8	24.3	21.1	15.9	14.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)