

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: P230034

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

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P230034
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-LD5-35-S-UNV-L940-CD1-U
Description: CRUZE 2x4 LED TROFFER
WITH SMOOTH LENS
Light Source: (168) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3144.0 lumens
Efficiency: N/A
Efficacy: 124.2 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

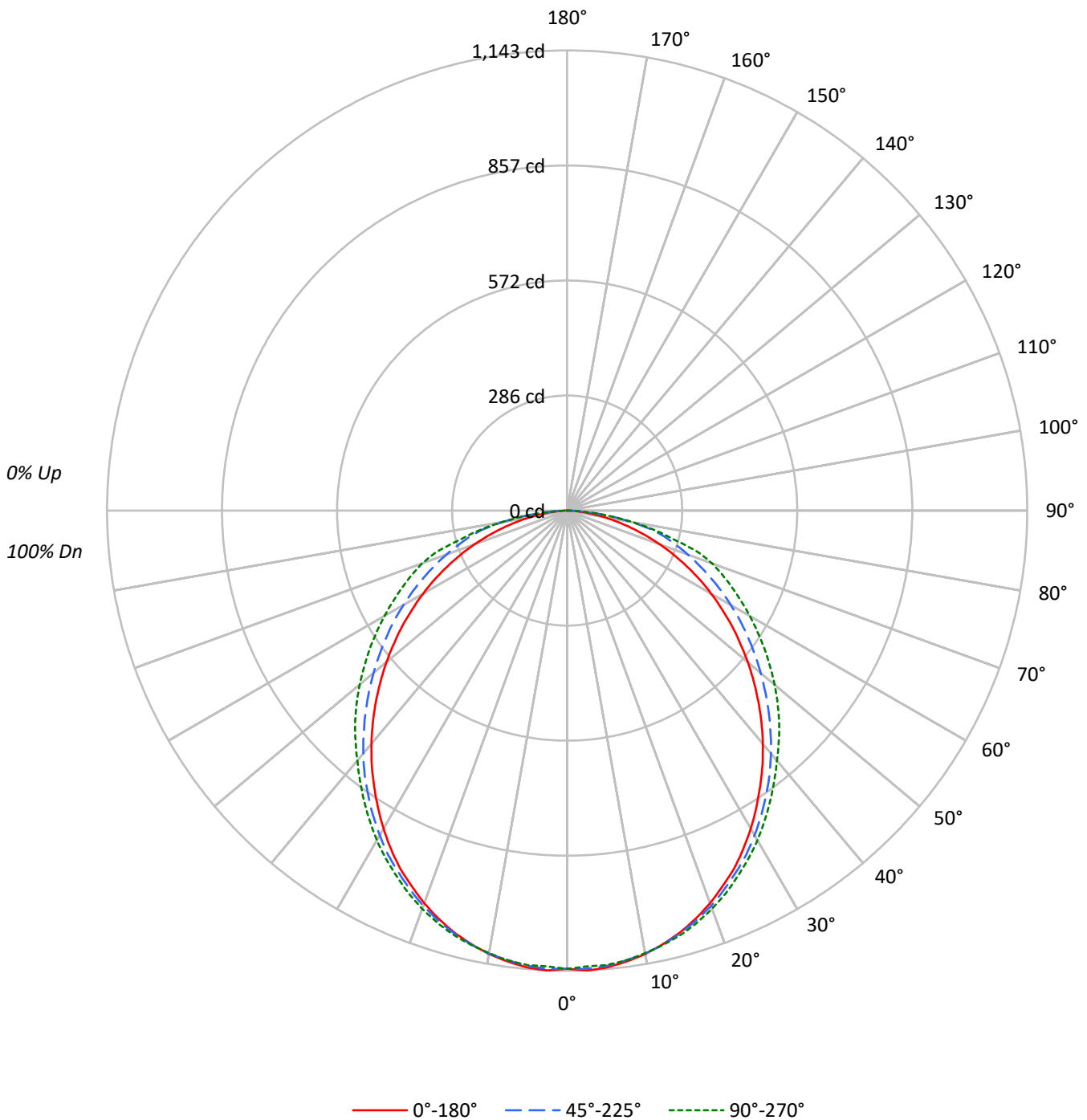
Input Watts (W): 25.32
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1531	1531	1531
5°	1539	1533	1530
10°	1528	1527	1525
15°	1511	1514	1520
20°	1486	1496	1507
25°	1457	1472	1488
30°	1417	1447	1469
35°	1373	1416	1445
40°	1328	1384	1424
45°	1278	1348	1417
50°	1226	1314	1408
55°	1173	1286	1404
60°	1112	1264	1410
65°	1046	1249	1439
70°	963	1255	1506
75°	854	1300	1403
80°	714	1232	1265
85°	533	985	905



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	107.6	3.4
10°-20°	306.0	9.7
20°-30°	456.1	14.5
30°-40°	536.9	17.1
40°-50°	545.6	17.4
50°-60°	490.5	15.6
60°-70°	387.5	12.3
70°-80°	245.9	7.8
80°-90°	67.8	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°	869.7	27.7
0°-40°	1406.6	44.7
0°-60°	2442.8	77.7
0°-90°	3144.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3144.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1138	1138	1138	1138	1138	
5°	1139	1130	1135	1133	1133	108
15°	1085	1080	1087	1090	1091	306
25°	981	980	992	998	1002	451
35°	836	841	862	871	880	523
45°	672	681	708	729	745	518
55°	500	513	548	584	598	447
65°	328	345	392	435	452	325
75°	164	192	250	272	270	175
85°	34	60	64	59	59	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1138.2	1138.2	1138.2	1138.2	1138.2
2.5°	1143.4	1135.0	1139.2	1137.1	1133.0
5°	1139.2	1129.8	1135.0	1133.0	1133.0
7.5°	1129.8	1122.5	1126.7	1125.6	1126.7
10°	1118.3	1111.0	1117.3	1117.3	1116.2
12.5°	1102.6	1096.3	1103.7	1103.7	1104.7
15°	1084.8	1079.6	1086.9	1090.1	1091.1
17.5°	1062.9	1057.6	1067.0	1070.2	1073.3
20°	1037.8	1035.7	1045.1	1048.2	1052.4
22.5°	1009.5	1009.5	1018.9	1023.1	1029.4
25°	981.3	980.2	991.7	998.0	1002.2
27.5°	947.8	948.8	963.5	969.8	975.0
30°	912.2	914.3	931.1	938.4	945.7
32.5°	874.6	878.7	897.6	905.9	913.3
35°	835.9	841.1	862.0	871.4	879.8
37.5°	797.1	804.5	826.4	835.9	845.3
40°	756.3	762.6	787.7	799.2	810.7
42.5°	714.5	722.9	748.0	764.7	778.3
45°	671.6	681.0	708.2	729.2	744.8
47.5°	628.7	641.3	667.4	695.7	709.3
50°	585.8	598.4	627.7	659.1	672.7
52.5°	541.9	554.4	587.9	620.4	635.0
55°	500.0	512.6	548.2	583.7	598.4
57.5°	456.1	469.7	509.5	546.1	560.7
60°	413.2	426.8	469.7	508.4	524.1
62.5°	371.4	386.0	431.0	471.8	487.5
65°	328.5	345.2	392.3	435.2	451.9
67.5°	286.6	305.5	354.6	399.6	417.4
70°	244.8	266.8	319.1	365.1	382.9
72.5°	204.0	228.1	283.5	329.5	338.9
75°	164.2	192.5	250.0	272.0	269.9
77.5°	126.6	158.0	212.4	216.5	222.8
80°	92.1	126.6	159.0	167.4	163.2
82.5°	60.7	95.2	114.0	109.8	108.8
85°	34.5	59.6	63.8	58.6	58.6
87.5°	14.6	24.1	20.9	15.7	14.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)